حمل الآن

مجانا وحصريا

امتحانات رقم (1)

الترم الثانى





Model (1) — 20 Marks

1 A) Complete the following sentences:

1. The reaction of an acid with a base to form salt and water is known as .... reaction.
2. The two factors of a genetic trait are identical in a .... individual.
3. .... is used to measure electrical potential difference.

B) Give a reason for:

1. The pituitary gland is called the master gland.

....

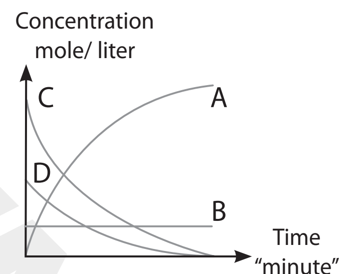
2. Reactions between ionic compounds are fast, while reactions between covalent compounds are slow.

....

....

....

C) The opposite figure represents the relation between concentration and time for a certain reaction. Determine the following:



1. The reactants, products and catalyst.

....

2. Write the balanced equation that represents this reaction using the given symbols.

....

2 A) Cross out the odd word, then mention the relationship between the rest words:

1. Uranium – Cesium – Barium – Radium

....

2. Chromosome - DNA – Protein – Enzymes

....

3. Nature of reactants – Temperature of reactants – Concentration of products – Catalysts.

....

B) Write the balanced chemical equation for each of the following:

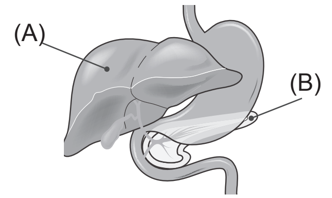
1. Sodium chloride solution reacts with silver nitrate solution.

....

2. Magnesium reacts with copper sulfate solution.

....

C) Look at the opposite diagram, then answer:



Name the hormones secreted by organ (B) which ... :

1. lowers the blood glucose level. (.......................................)
2. stimulates organ (A) to convert stored glycogen into glucose.
   (.......................................)

3 A) Choose the correct answer:

1. An electric circuit consists of a battery with an electromotive force of 3 volts connected in series with a resistance of 6 ohms. The current intensity flowing through the circuit is ....

   a) 2 ampere b) 1 ampere c) 1.5 ampere d) 0.5 ampere

2. The percentage of the recessive trait in the first generation resulting from the cross of two parents, one carrying a pure dominant trait and the other carrying a recessive trait, is ....

   a) 0% b) 25% c) 50% d) 75%

3. $Fe^{+2} \longrightarrow Fe^{+3}$. This process is called ....

   a) reduction b) decomposition
   c) oxidation d) oxidation and reduction together

B) Define:

1. Electric current intensity.

   ....

   ....

2. Radioactive pollution.

   ....

C) An electrical conductor has a voltage difference of 18 volts across its terminals, with a current of 2 amperes flowing through it. When connected to another power source, the current increased by 3 amperes. Calculate the potential difference across the conductor.

....

....

4 A) Correct the underlined words:

1. Most metals sulfates decompose by heating into metal oxide and **carbon dioxide** gas.
   (...................................)
2. The thyroid gland secretes **growth** hormone, which regulates calcium levels in the blood.
   (...................................)

B) What happens if ……………?

1 The mating of two pure individuals with one pair of contrasting traits.

(in terms to the first and second generations)

………

………

2 Reactant concentration reaches zero in a chemical reaction.

………

C) When two tomato plants are crossed—one has red fruits and the other has yellow fruits (a trait that is always recessive). Explain, based on genetics, the genetic structure of the parents and their gametes, and illustrate the offspring resulting from their cross.

………

………

………

………

………

………

Model (2)

20 Marks

1 A) Choose the correct answer:

1. .... gland secretes hormone regulating general body growth.

a) Pituitary b) Thyroid c) Adrenal d) Reproductive

2. .... is the physical quantity whose measuring unit is volt/ampere.

a) Electric current b) Potential difference

c) Electric charge d) Electrical resistance

3. Sodium metal replaces all the following metals in their salt solutions except ....

a) copper b) potassium c) magnesium d) zinc

B) 1 Calculate the electric current intensity of charges of 5400coulomb flow through a conductor in 30 seconds.

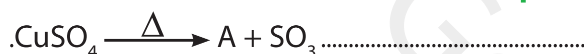
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2 Complete the following equation:

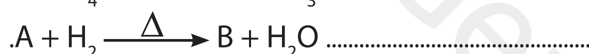


$Cu(OH)_2 \xrightarrow{\Delta}$ ....

C) What is the chemical formula of compound A and element B in the following reactions?



$.CuSO_4 \xrightarrow{\Delta} A + SO_3$ ....



$.A + H_2 \xrightarrow{\Delta} B + H_2O$ ....

....

2 A) Write the scientific term:

1. An inflatable bag folded inside the steering wheel of modern cars as a safety tool during accidents. (..................................)

2. The potential difference between the terminals of a battery in an open electrical circuit. (..................................)

3. The increase in the amount and intensity of nuclear radiation in the surrounding environment. (..................................)

B) What is the importance or use of ……?

1. Catalytic converters in modern cars.

....

2. Variable resistor (sliding rheostat).

....

C) Compare between each of the following:

1 Positive catalyst and negative catalyst (in terms of the speed of chemical reaction)

Positive catalyst	Negative catalyst
....	....

2 Skin color in humans and the skill of playing football (in terms of trait type)

Skin color in humans	Skill of playing football
....	....

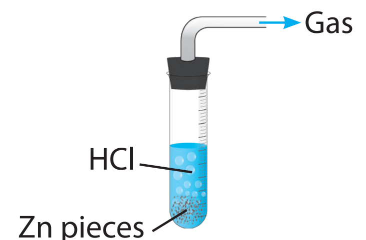
3 A) Put (✓) or (✗):

1 Mendel allowed pea plants to self-pollinate for several generations to ensure trait purity. ( )

2 The resistance of a conductor through which an electric current intensity of 12 ampere flows when the potential difference across its terminals is 2 volts is 6 ohms. ( )

3 When silver is added to hydrochloric acid, silver chloride is formed and hydrogen gas is evolved. ( )

B) Look at the opposite figure, then answer:



1 What is the name of the released gas? ....

2 What is the name of the formed salt? ....

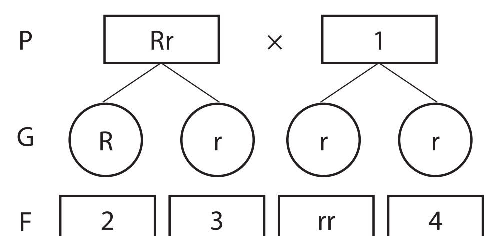
C) The opposite diagram shows cross-pollination between a pea plant with red flowers and another with white flowers. Answer the following:

1 Replace the numbers with the appropriate genetic symbols.

....

2 State the percentage of recessive traits.

....



4 A) Complete the following sentences:

1 During emergencies the secretion of .... hormone increases.

2 Electric cells produce a .... current.

3 The .... enzyme is found in sweet potatoes increases the rate of chemical reactions.

B) What happens when ...?

1. A lit matchstick is brought near the mouth of a test tube containing heated copper carbonate.

 ....

2. Increasing the length of the wire in a sliding rheostat in an electric circuit.
 (in terms to the current intensity)

 ....

C) Give a reason for:

1. It is necessary for humans to include iodine in their food.

 ....

 ....

2. Food is stored in the refrigerator.

 ....

 ....

Model (3)

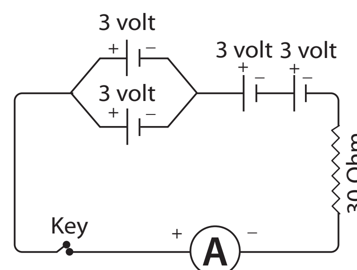
20 Marks

1 A) Write the scientific term:

1. Traits that cannot be transferred from one generation to another. (..................................)
2. The change in the concentration of reactants and products per unit of time. (..................................)
3. The potential difference between the two poles of the dry cell in an open electrical circuit. (..................................)

B) From the opposite electric circuit, write the number indicating each of the following:

1. The current intensity passing through the circuit.
....
2. The current intensity passing through the circuit if all the dry cells are connected in parallel.
....



C) Mention the use or importance for each of the following:

1. Dynamo
....
2. Adrenaline hormone
....

2 A) Complete the following sentences:

1. One of the effects of human exposure to high doses of radiation for short periods is the ....
2. When sodium hydroxide solution is added to copper sulfate solution, a colorless .... solution is formed.
3. If the work done to transfer an electric charge of 200 coulomb between two points is 2200 joule , the potential difference between the two points is equal ....

B) Study the following equations, then answer:

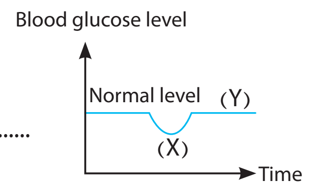
....
....

1. The name of compound A and its formula: ....
2. The color of the precipitate B and its formula. ....

C) Look at the opposite graph, then answer:

1. What is the hormone that causes the change in blood sugar concentration from (X) to (Y)?

   ....



2. The gland that secretes this hormone.

   ....

3 A) Cross out the odd word, then mention the relation between the other words:

1. Calcium / Silver / Aluminum / Magnesium

   ....

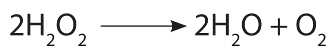
2. Ampere / Volt / Ohmmeter / Ohm

   ....

3. Exophthalmoses / Weight loss / Tension / Continuous growth of limb bones

   ....

B) The opposite diagram shows the rate of decomposition of hydrogen peroxide.



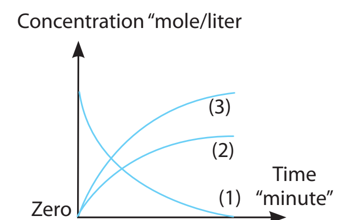
$$2H_2O_2 \longrightarrow 2H_2O + O_2$$

1. Write the name of the compound or element indicated by each number:

   ....

   ....

   ....



2. The catalyst used in this reaction:

   ....

C) Explain, based on genetics, the genetic structure of the individuals in the first generation resulting from the cross between a man with hybrid brown eyes (Bb) and a woman with pure colored eyes (bb). Also indicate the percentage of the offspring who will have the colored eyes trait among the resulting generation.

....

....

....

....

....

....

4 A) Put (✓) or (✗):

1. The genetic structure of a tall pea plant with pure red flowers is (TTRR). ( )
2. The maximum safe radiation dose for workers in the field of radiation is 1 millisievert per year. ( )
3. The reaction time of iron rusting is shorter than that of soap production. ( )

B) Write the number that indicates to each of the following:

1. The number of electric cells that make up a battery with an electromotive force (e.m.f.) of 9 volt, knowing that all the cells are connected in series and the e.m.f. of each cell is 1.5 volt.

 ....

2. The hereditary traits that Mendel selected for his experiments.

 ....

C) You have three electric cells, each with an e.m.f. of 3 volt, a fixed resistance of 10 ohms, and an ammeter. How can you connect them to make the ammeter read ...?

1. 0.6 ampere
2. 0.9 ampere

1 .... 2 ....

....

....

....

....

....

....

Model (4)

20 Marks

1 A) Correct the underlined words:

1. The airbag contains ...., which decomposes when there is a sudden change in speed.
2. A copper wire with a length of 2 meters carries a current of 10 ampere. If the length of the wire becomes 4 meter while the cross-sectional area remains constant, the current intensity passing through it becomes ....
3. A deficiency of .... in food leads to a deficiency of the thyroxine hormone.

B) What is meant by .....?

1. Endocrine Glands.

....

2. Neutralization Reaction.

....

C) Explain with balanced symbolic equations:

1. The effect of heat on copper carbonate (green).

....

2. The reaction of dilute hydrochloric acid with sodium carbonate.

....

2 A) Cross out the odd word:

1. Skin color – Blood type – Number of fingers – Swimming

....

2. Destruction of bone marrow – Changes in the structure of sex chromosomes – Destruction of the nervous system – Destruction of the digestive system

....

B) Mention the roles of the following scientists:

1. Badel and Tatum

....

....

2. Watson and Crick

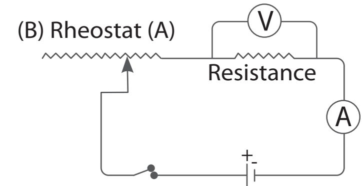
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....

C) In the opposite electric circuit , what happens to each of the following when the rheostat slider is moved from (A) to (B).

1. Ammeter reading and voltmeter reading

....



2. Resistance value

....

3 A) Mention one example for each of the following:

1. A gas that causes a glowing matchstick.

....

2. A type of radiation activity released during nuclear reactions that can be controlled.

....

3. A hormone responsible for regulating calcium levels in the blood.

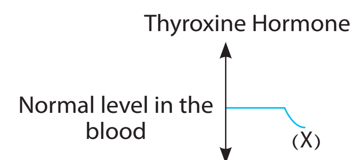
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B) A conductor with a resistance of 1000 ohm is connected to a power source with a potential difference of 100 volts. Calculate the amount of charge passing through the conductor during a time of 100 seconds.

....

....

C) The diagram shows a hormone secreted by the thyroid gland into the blood. What disease results from the hormone reaching point (X)

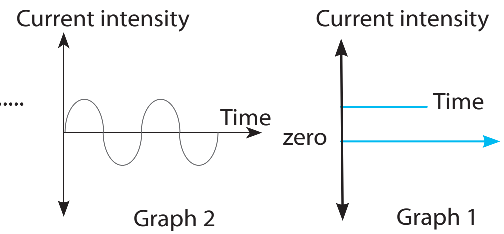


....

4 A) Correct the underlined words:

1. Sodium nitrate decomposes with heat, and **nitrogen** gas is released. (..............................)
2. The first part to be affected when a person is exposed to a large dose of radiation over a short period of time is the **stomach**. (..............................)
3. **An ohmmeter** is used to control the potential difference between the two ends of a conductor in an electrical circuit. (..............................)

(B) Study the two graphs shown and determine which graph represents:



1. A current that is not used in the electroplating process.

....

2. A current produced from the conversion of chemical energy into electrical energy.

....

(C) Explain, based on genetic principles, the result of mating a male and a female fruit fly, both with long wings. The result was 45 long-winged individuals and 15 short-winged individuals, known that the gene for long wings is represented by the symbol (T) and the gene for short wings is represented by the symbol (t):

....
....
....
....
....
....

Model (5)

20 Marks

1 A) Complete the following sentences:

1. The simple goitre disease is caused by a deficiency in the secretion of **growth** hormone. (..)
2. The unit volt.ampere.second is a unit for **measuring electric potential difference.** (..)
3. Aluminium reacts with dilute hydrochloric acid after a period of time due to the presence of a layer of **aluminium chloride.** (..)

B) Give a reason for:

1. The ability to roll the tongue is a dominant trait in humans.

....

....

2. Radioactive wastes are buried far away from groundwater sources.

....

C) Write the balanced symbolic equation for each of the following:

1. Thermal decomposition of sodium nitrate:

....

2. The reaction between sodium and water:

....

2 A) Write the scientific term:

1. The state of an electric conductor that shows the transfer of electricity from or to it when it is connected to another conductor (..)
2. A substance that changes the rate of a chemical reaction without being changed itself. (..)
3. Substances or chemical messengers that regulate and organize biological activities in a living organism. (..

B) What happens when ......?

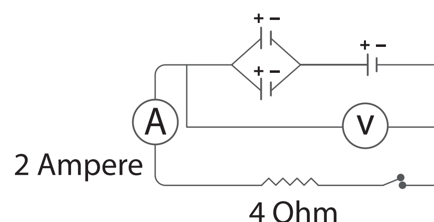
1. Mendel left the stigmas of pea plant flowers uncovered during his study of genetic traits.

....

2. The flow of electrons in opposite directions in an electric circuit.

....

C) In the given diagram, if the cells are identical, calculate:



1. Voltmeter reading

....

2. The electromotive force (e.m.f) of each cell = ...

3 A) Complete the following sentences:

1. The phenomenon of radioactivity was discovered by the scientist ....

2. The reaction $O^{-2} \longrightarrow O^{-} + e^{-}$ represents a process of ....

3. The trait of attached earlobes is a .... trait in humans.

B) Compare between each of the following:

1. The oxidizing agent and the reducing agent (in terms of loss or gain of electrons).

Oxidizing agent	Reducing agent
....	....

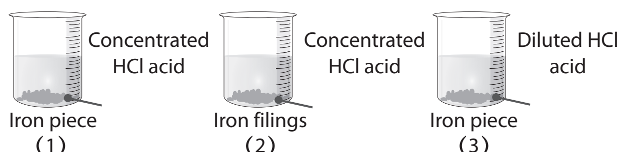
2. The pure individual and the hybrid individual (in terms of definition).

Pure individual	Hybrid individual
....	....

C) Look at the following reactions, then answer:

1. Which of these reactions is the fastest (1, 2, or 3)?

....



2. The two factors affecting the speed of this reaction:

....

4 A) Choose the correct answer:

1. .... hormone responsible for the appearance of secondary sexual characteristics in females.

a- Estrogen b- Testosterone c- Insulin d- Progesterone

2. .... is the international unit that measures the radiation absorbed by the human body.

a- Joule b- Meter c- Sievert d- Coulomb

3. If the genetic structure of a child is (bb), the possible genetic structure of the parents is ....

a- Bb × BB b- bb × BB c- Bb × bb d- BB × BB

B) A conductor carries a current of 0.2 ampere and the potential difference across it is 10 volt. Calculate:

1. The amount of charge passing through it in 5 minutes:

....

2. The work done in transferring 100 coulomb of charge:

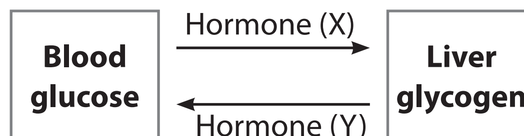
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C) Look at the opposite diagram, then answer:

1. What are the names of hormone (X) and hormone (Y)?

....

....



2. What disease results from a deficiency of hormone (Y)?

....

Model (1)

20 Marks

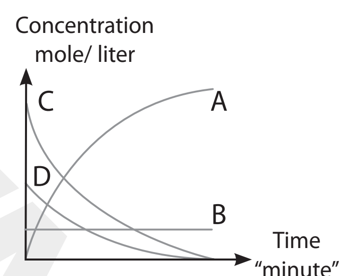
1 **A) Complete the following sentences:**

1. The reaction of an acid with a base to form salt and water is known as **neutralization** reaction.
2. The two factors of a genetic trait are identical in a **pure** individual.
3. **Voltmeter** is used to measure electrical potential difference.

B) Give a reason for:

1. The pituitary gland is called the master gland.
   - **Because it secretes hormones that regulate the activities of most other endocrine glands.**
2. Reactions between ionic compounds are fast, while reactions between covalent compounds are slow.
   - **Because ionic compounds dissociate into ions in water, allowing reactions to occur between the ions directly, while covalent compounds do not dissociate into ions, and reactions occur between molecules.**

C) The opposite figure represents the relation between concentration and time for a certain reaction. Determine the following:



1. The reactants, products and catalyst.
   Reactants (C,D) - Products (A) - Catalyst (B)
2. Write the balanced equation that represents this reaction using the given symbols.



$2C + D \xrightarrow{B} A$

2 **A) Cross out the odd word, then mention the relationship between the rest words:**

1. Uranium – Cesium – Barium – Radium
   - **(Barium) (Radioactive elements)**
2. Chromosome - DNA – Protein – Enzymes
   - **(Enzymes) (Structure of chromosome)**
3. Nature of reactants – Temperature of reactants – Concentration of products – Catalysts.
   - **Concentration of products) (Factors affecting the speed of reaction)**

B) Write the balanced chemical equation for each of the following:

1. Sodium chloride solution reacts with silver nitrate solution.



$NaCl + AgNO_3 \rightarrow NaNO_3 + AgCl\downarrow$

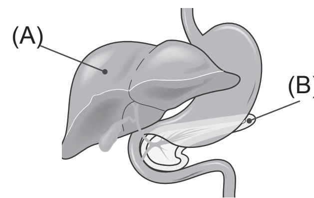
2. Magnesium reacts with copper sulfate solution.



$Mg + CuSO_4 \rightarrow MgSO_4 + Cu$

C) Look at the opposite diagram, then answer:

Name the hormones secreted by organ (B) which ... :



1. lowers the blood glucose level. (**Insulin hormone**)
2. stimulates organ (A) to convert stored glycogen into glucose.
   (**Glucagon hormone**)

3 A) Choose the correct answer:

1. An electric circuit consists of a battery with an electromotive force of 3 volts connected in series with a resistance of 6 ohms. The current intensity flowing through the circuit is ....

   a) 2 ampere b) 1 ampere c) 1.5 ampere **d) 0.5 ampere**

2. The percentage of the recessive trait in the first generation resulting from the cross of two parents, one carrying a pure dominant trait and the other carrying a recessive trait, is ....

   a) 0% b) 25% c) 50% d) 75%

3. $Fe^{+2} \longrightarrow Fe^{+3}$. This process is called ....

   a) reduction b) decomposition

   c) oxidation d) oxidation and reduction together

B) Define:

1. Electric current intensity.
   It is the quantity of electricity in coulomb or the electric charges flowing through a cross-section of the conductor in one second

2. Radioactive pollution.
   - It is the increase in nuclear radiation levels in the surrounding environment.

C) An electrical conductor has a voltage difference of 18 volts across its terminals, with a current of 2 amperes flowing through it. When connected to another power source, the current increased by 3 amperes. Calculate the potential difference across the conductor.

Resistance (R) $= \frac{V}{I} = \frac{18}{2} = 9$ **ohms**

$(V) = R \times I = 9 \times 5 = 45$ **volts**

4 A) Correct the underlined words:

1. Most metals sulfates decompose by heating into metal oxide and **carbon dioxide** gas.
   (**Sulphur trioxide**)
2. The thyroid gland secretes **growth** hormone, which regulates calcium levels in the blood.
   (**Calcitonin**)

B) What happens if ....?

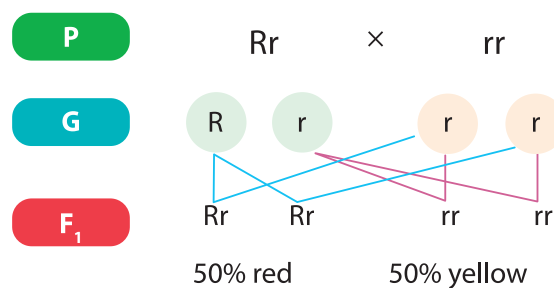
1. The mating of two pure individuals with one pair of contrasting traits. (in terms to the first and second generations)

   - The dominant trait appears in the first generation at a rate of 100%, then both traits are inherited together in the second generation at a ratio of 3 (dominant trait) : 1 (recessive trait)

2. Reactant concentration reaches zero in a chemical reaction.

   - The reaction stops, and the product concentration reaches 100%.

C) When two tomato plants are crossed—one has red fruits and the other has yellow fruits (a trait that is always recessive). Explain, based on genetics, the genetic structure of the parents and their gametes, and illustrate the offspring resulting from their cross.



Model (2)

20 Marks

1 A) Choose the correct answer:

1. ………………………. gland secretes hormone regulating general body growth.

   a) Pituitary b) Thyroid c) Adrenal d) Reproductive

2. ………………… is the physical quantity whose measuring unit is volt/ampere.

   a) Electric current b) Potential difference

   c) Electric charge d) Electrical resistance

3. Sodium metal replaces all the following metals in their salt solutions except ……………. .

   a) copper b) potassium c) magnesium d) zinc

B) 1 Calculate the electric current intensity of charges of 5400coulomb flow through a conductor in 30 seconds.

$$I = \frac{q}{t} = \frac{5400}{30} = 180 \text{ amp.}$$

2 Complete the following equation:



$Cu(OH)_2 \xrightarrow{\Delta} CuO + H_2O$

C) What is the chemical formula of compound A and element B in the following reactions?



$CuSO_4 \xrightarrow{\Delta} A + SO_3$



$A + H_2 \xrightarrow{\Delta} B + H_2O$

A: (CuO) B: (Cu)

2 A) Write the scientific term:

1. An inflatable bag folded inside the steering wheel of modern cars as a safety tool during accidents. (Airbag)
2. The potential difference between the terminals of a battery in an open electrical circuit. (Electromotive force)
3. The increase in the amount and intensity of nuclear radiation in the surrounding environment. (Radioactive pollution)

B) What is the importance or use of ……?

1. Catalytic converters in modern cars.

   - To treat harmful gases produced from fuel combustion before releasing them.

2. Variable resistor (sliding rheostat).

   - To control the electric current intensity and the potential difference in a circuit.

C) Compare between each of the following:

1 Positive catalyst and negative catalyst (in terms of the speed of chemical reaction)

Positive catalyst	Negative catalyst
Increases the speed of a chemical reaction	Decreases the speed of a chemical reaction

2 Skin color in humans and the skill of playing football (in terms of trait type)

Skin color in humans	Skill of playing football
Genetic trait	Acquired trait

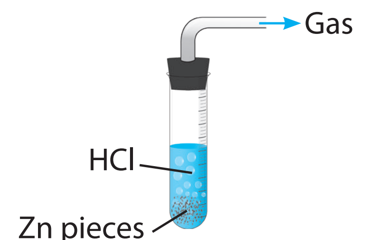
3 A) Put (✓) or (✗):

1 Mendel allowed pea plants to self-pollinate for several generations to ensure trait purity. (✓)

2 The resistance of a conductor through which an electric current intensity of 12 ampere flows when the potential difference across its terminals is 2 volts is 6 ohms. (✗)

3 When silver is added to hydrochloric acid, silver chloride is formed and hydrogen gas is evolved. (✗)

B) Look at the opposite figure, then answer:



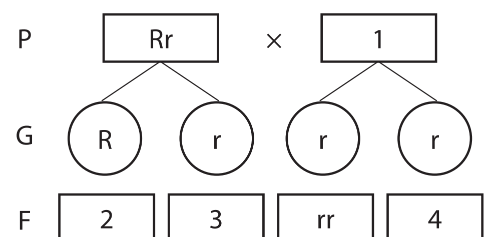
1 What is the name of the released gas? **Hydrogen gas.**

2 What is the name of the formed salt? **Zinc chloride.**

C) The opposite diagram shows cross-pollination between a pea plant with red flowers and another with white flowers. Answer the following:

1 Replace the numbers with the appropriate genetic symbols.

1-(rr) 2-(Rr) 3-(Rr) 4-(rr)



2 State the percentage of recessive traits.

50%

4 A) Complete the following sentences:

1 During emergencies the secretion of **adrenaline** hormone increases.

2 Electric cells produce a **direct** current.

3 The **oxidase** enzyme is found in sweet potatoes increases the rate of chemical reactions.

B) What happens when ...?

1. A lit matchstick is brought near the mouth of a test tube containing heated copper carbonate.
   it is extinguished due to the release of carbon dioxide gas.

2. Increasing the length of the wire in a sliding rheostat in an electric circuit.
   (in terms to the current intensity)
   The electric current intensity flowing through the circuit decreases.

C) Give a reason for:

1. It is necessary for humans to include iodine in their food.
   Because iodine is involved in the formation of the thyroxine hormone, which plays an important role in the food assimilation processes.

2. Food is stored in the refrigerator.
   Because the low temperature in the refrigerator slows down the chemical reactions caused by bacteria, which leads to spoiling of food.

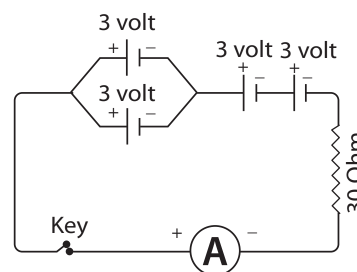
Model (3)

20 Marks

1 **A) Write the scientific term:**

1. Traits that cannot be transferred from one generation to another. (**Acquired traits**)
2. The change in the concentration of reactants and products per unit of time. (**Rate of chemical reaction**)
3. The potential difference between the two poles of the dry cell in an open electrical circuit. (**Electromotive force**)

B) From the opposite electric circuit, write the number indicating each of the following:



1. The current intensity passing through the circuit.
   (0.3 amperes)
2. The current intensity passing through the circuit if all the dry cells are connected in parallel.
   (0.1 amperes)

C) Mention the use or importance for each of the following:

1. Dynamo
   - It converts kinetic energy into electrical energy – generates alternating electric current.
2. Adrenaline hormone
   - It stimulates various body organs for a quick response in emergency situations.

2 **A) Complete the following sentences:**

1. One of the effects of human exposure to high doses of radiation for short periods is the **damage of bone marrow**.
2. When sodium hydroxide solution is added to copper sulfate solution, a colorless **sodium sulfate** solution is formed.
3. If the work done to transfer an electric charge of 200 coulomb between two points is 2200 joule , the potential difference between the two points is equal **11 volt**.

B) Study the following equations, then answer:



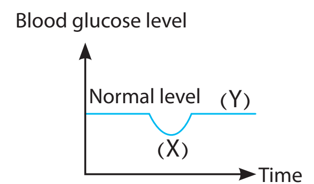
$NaOH + HCl \longrightarrow A + H_2O$



$A + AgNo_3 \longrightarrow NaNO_3 + B \downarrow$

1. The name of compound A and its formula: **Sodium chloride (NaCl)**
2. The color of the precipitate B and its formula. **Silver chloride (AgCl) (white ppt)**

C) Look at the opposite graph, then answer:



1. What is the hormone that causes the change in blood sugar concentration from (X) to (Y)?
   (Glucagon hormone)

2. The gland that secretes this hormone.
   (Pancreas gland)

3 A) Cross out the odd word, then mention the relation between the other words:

1. Calcium / Silver / Aluminum / Magnesium
   (Silver - Elements that can replace hydrogen)

2. Ampere / Volt / Ohmmeter / Ohm
   (Ohmmeter - Units of measurement)

3. Exophthalmoses / Weight loss / Tension / Continuous growth of limb bones
   (Continuous growth of limb bones - Symptoms of exophthalmic goiter)

B) The opposite diagram shows the rate of decomposition of hydrogen peroxide.

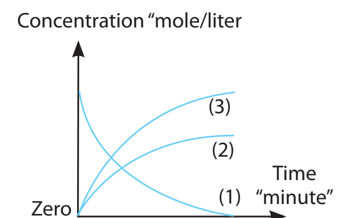


$2H_2O_2 \longrightarrow 2H_2O + O_2$

1. Write the name of the compound or element indicated by each number:
   (1) $2H_2O_2$ – Hydrogen peroxide

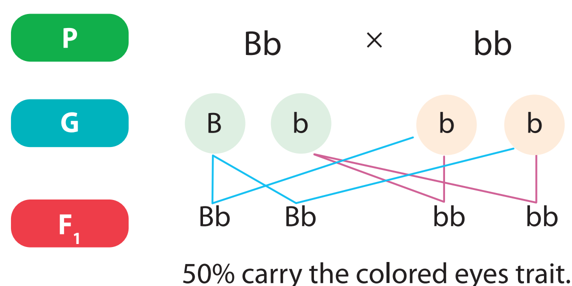
   (2) O_2 – Oxygen

   (3) $2H_2O$ – Water



2. The catalyst used in this reaction:
   manganese dioxide . (MnO_2)

C) Explain, based on genetics, the genetic structure of the individuals in the first generation resulting from the cross between a man with hybrid brown eyes (Bb) and a woman with pure colored eyes (bb). Also indicate the percentage of the offspring who will have the colored eyes trait among the resulting generation.



50% carry the colored eyes trait.

4 A) Put (✓) or (✗):

1. The genetic structure of a tall pea plant with pure red flowers is (TTRR). (✓)
2. The maximum safe radiation dose for workers in the field of radiation is 1 millisievert per year. (✗)
3. The reaction time of iron rusting is shorter than that of soap production. (✗)

B) Write the number that indicates to each of the following:

1. The number of electric cells that make up a battery with an electromotive force (e.m.f.) of 9 volt, knowing that all the cells are connected in series and the e.m.f. of each cell is 1.5 volt.

   6 cells

2. The hereditary traits that Mendel selected for his experiments.

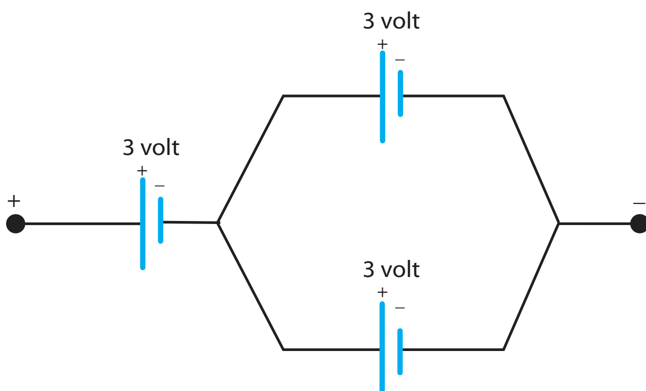
   7 traits

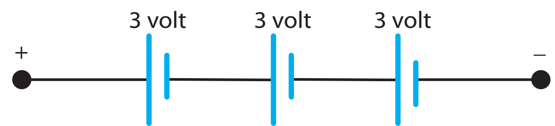
C) You have three electric cells, each with an e.m.f. of 3 volt, a fixed resistance of 10 ohms, and an ammeter. How can you connect them to make the ammeter read ...?

1. 0.6 ampere
2. 0.9 ampere

1. **$V = R \times I = 10 \times 0.6 = 6$ volts**

2. **$V = R \times I = 10 \times 0.9 = 9$ volts**





Model (4) 20 Marks

1 A) Correct the underlined words:

1. The airbag contains **sodium azide**, which decomposes when there is a sudden change in speed.
2. A copper wire with a length of 2 meters carries a current of 10 ampere. If the length of the wire becomes 4 meter while the cross-sectional area remains constant, the current intensity passing through it becomes **5 ampere**.
3. A deficiency of **iodine** in food leads to a deficiency of the thyroxine hormone.

B) What is meant by .....?

1. Endocrine Glands.
   - They are ductless glands that secrete their hormone secretions directly into the blood.
2. Neutralization Reaction.
   - It is a reaction between an acid and a base to form a salt and water.

C) Explain with balanced symbolic equations:

1. The effect of heat on copper carbonate (green).
   $$CuCO_3 \xrightarrow{\Delta} CuO + CO_2\uparrow$$
2. The reaction of dilute hydrochloric acid with sodium carbonate.
   $$Na_2CO_3 + 2HCl \longrightarrow 2NaCl + H_2O + CO_2\uparrow$$

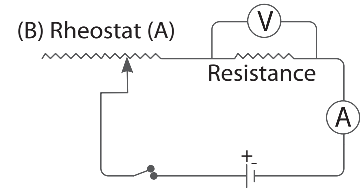
2 A) Cross out the odd word:

1. Skin color – Blood type – Number of fingers – Swimming
   - (Swimming)
2. Destruction of bone marrow – Changes in the structure of sex chromosomes – Destruction of the nervous system – Destruction of the digestive system
   - Changes in the structure of sex chromosomes

B) Mention the roles of the following scientists:

1. Badel and Tatum
   - They discovered how genes control the expression of the genetic traits.
2. Watson and Crick
   - They proposed the model of the DNA molecule, which consists of two strands twisted around each other in a double helix structure.

C) In the opposite electric circuit , what happens to each of the following when the rheostat slider is moved from (A) to (B).



1. Ammeter reading and voltmeter reading

   Both the ammeter and voltmeter readings decrease.

2. Resistance value

   The resistance value increases.

3 A) Mention one example for each of the following:

1. A gas that causes a glowing matchstick.

   (Oxygen gas)

2. A type of radiation activity released during nuclear reactions that can be controlled.

   (Artificial radiation activity)

3. A hormone responsible for regulating calcium levels in the blood.

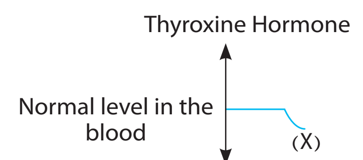
   (Calcitonin hormone)

B) A conductor with a resistance of 1000 ohm is connected to a power source with a potential difference of 100 volts. Calculate the amount of charge passing through the conductor during a time of 100 seconds.

$$\text{Current intensity (I)} = \frac{\text{potential difference (V)}}{\text{Resistance (R)}} = \frac{100}{1000} = 0.1 \text{ amperes}$$

$$\text{Quantity of charge (q)} = \text{Current intensity (I)} \times \text{Time (t)} = 0.1 \times 100 = 10 \text{ coulomb}$$

C) The diagram shows a hormone secreted by the thyroid gland into the blood. What disease results from the hormone reaching point (X)



- Simple goiter disease

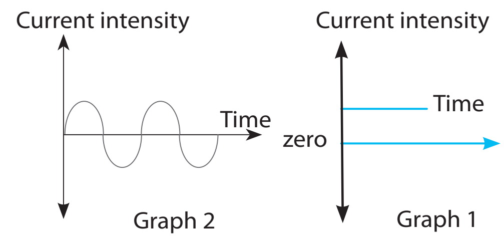
4 A) Correct the underlined words:

1. Sodium nitrate decomposes with heat, and **nitrogen** gas is released. (**Oxygen**)
2. The first part to be affected when a person is exposed to a large dose of radiation over a short period of time is the **stomach**. (**Bone marrow**)
3. **An ohmmeter** is used to control the potential difference between the two ends of a conductor in an electrical circuit. (**Sliding rheostat**).

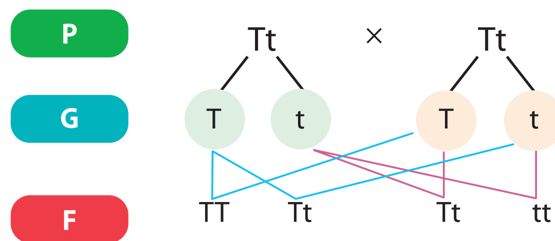
(B) Study the two graphs shown and determine which graph represents:

1. A current that is not used in the electroplating process.
   (Graph 2)

2. A current produced from the conversion of chemical energy into electrical energy.
   (Graph 1)



(C) Explain, based on genetic principles, the result of mating a male and a female fruit fly, both with long wings. The result was 45 long-winged individuals and 15 short-winged individuals, known that the gene for long wings is represented by the symbol (T) and the gene for short wings is represented by the symbol (t):



Model (5)

20 Marks

1 **A) Complete the following sentences:**

1. The simple goitre disease is caused by a deficiency in the secretion of **growth** hormone. **(Thyroxine)**
2. The unit volt.ampere.second is a unit for **measuring electric potential difference.** **(Work done)**
3. Aluminium reacts with dilute hydrochloric acid after a period of time due to the presence of a layer of **aluminium chloride.** **(Aluminium oxide)**

B) Give a reason for:

1. The ability to roll the tongue is a dominant trait in humans.
   – **Because the gene for tongue rolling is dominant over the gene for non-rolling when both are present.**
2. Radioactive wastes are buried far away from groundwater sources.
   – **To prevent radioactive contamination of the water.**

C) Write the balanced symbolic equation for each of the following:

1. Thermal decomposition of sodium nitrate:



$$2NaNO_3 \xrightarrow{\Delta} 2NaNO_2 + O_2\uparrow$$

2. The reaction between sodium and water:



$$2Na + 2H_2O \longrightarrow 2NaOH + H_2\uparrow + Heat$$

2 **A) Write the scientific term:**

1. The state of an electric conductor that shows the transfer of electricity from or to it when it is connected to another conductor **(Electric potential of a conductor)**
2. A substance that changes the rate of a chemical reaction without being changed itself. **(Catalyst)**
3. Substances or chemical messengers that regulate and organize biological activities in a living organism. **(Hormones**

B) What happens when ......?

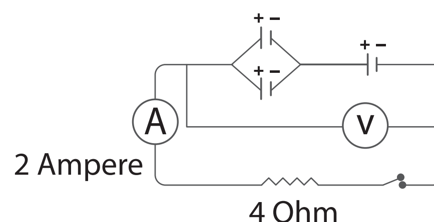
1. Mendel left the stigmas of pea plant flowers uncovered during his study of genetic traits.

   Cross-pollination will occur.

2. The flow of electrons in opposite directions in an electric circuit.

   An alternating electric current is generated.

C) In the given diagram, if the cells are identical, calculate:



1. Voltmeter reading

   $V = R \times I = 4 \times 2 = 8$ volt

2. The electromotive force (e.m.f) of each cell = **4 volts**

3 A) Complete the following sentences:

1. The phenomenon of radioactivity was discovered by the scientist …. **Henri Becquerel** ….
2. The reaction $O^{-2} \longrightarrow O^{-} + e^{-}$ represents a process of ………**oxidation**……….
3. The trait of attached earlobes is a ……. **recessive** ……. trait in humans.

B) Compare between each of the following:

1. The oxidizing agent and the reducing agent (in terms of loss or gain of electrons).

Oxidizing agent	Reducing agent
It is the element that gains one electron or more.	**It is the substance that loses one electron or more.**

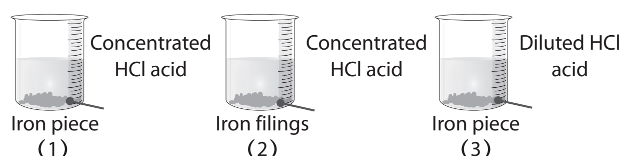
2. The pure individual and the hybrid individual (in terms of definition).

Pure individual	Hybrid individual
It is the individual that carries two identical genes for either the dominant trait or the recessive trait.	**It is the individual that carries two different genes one for dominant trait and the other for the recessive trait.**

C) Look at the following reactions, then answer:

1. Which of these reactions is the fastest (1, 2, or 3)?

   (Number 2)



2. The two factors affecting the speed of this reaction:

   – Surface area exposed to the reaction – Concentration of the reactants

4 A) Choose the correct answer:

1. ……………….. hormone responsible for the appearance of secondary sexual characteristics in females.

   a- Estrogen b- Testosterone c- Insulin d- Progesterone

2. ……………….. is the international unit that measures the radiation absorbed by the human body.

   a- Joule b- Meter **c- Sievert** d- Coulomb

3. If the genetic structure of a child is (bb), the possible genetic structure of the parents is ....

   a- Bb × BB b- bb × BB **c- Bb × bb** d- BB × BB

B) A conductor carries a current of 0.2 ampere and the potential difference across it is 10 volt. Calculate:

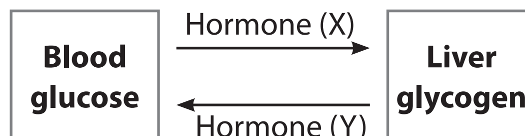
1. The amount of charge passing through it in 5 minutes:

   $q = I \times t = 0.2 \times 5 \times 60 = 60$ coulomb

2. The work done in transferring 100 coulomb of charge:

   $W = V \times q = 10 \times 100 = 1000$ Joule

C) Look at the opposite diagram, then answer:



1. What are the names of hormone (X) and hormone (Y)?

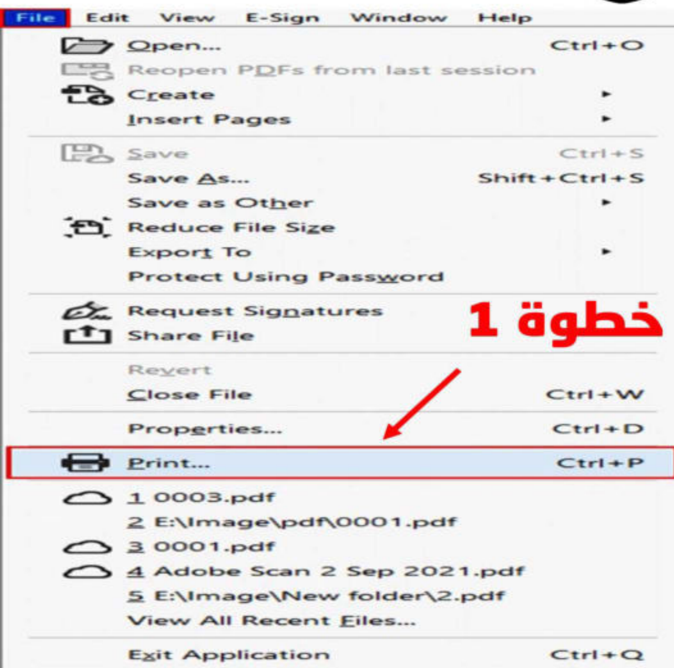
   (X) = Insulin **(Y) = Glucagon**

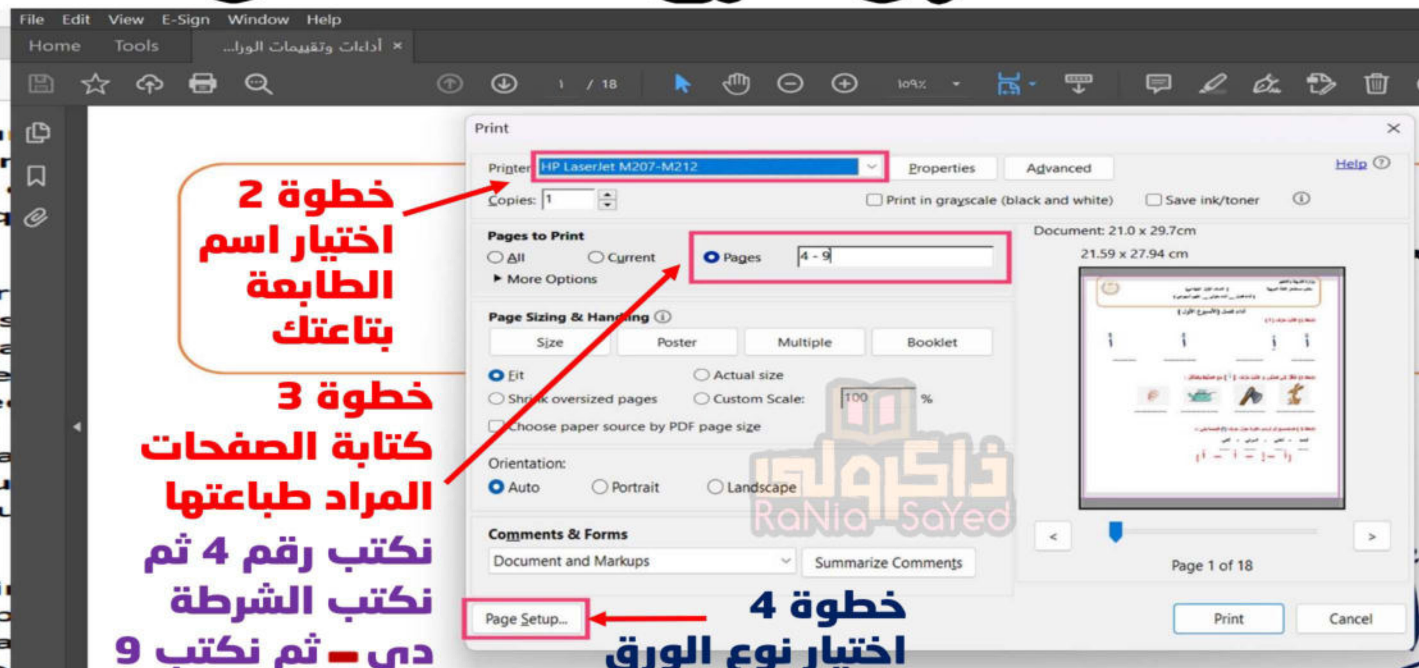
2. What disease results from a deficiency of hormone (Y)?

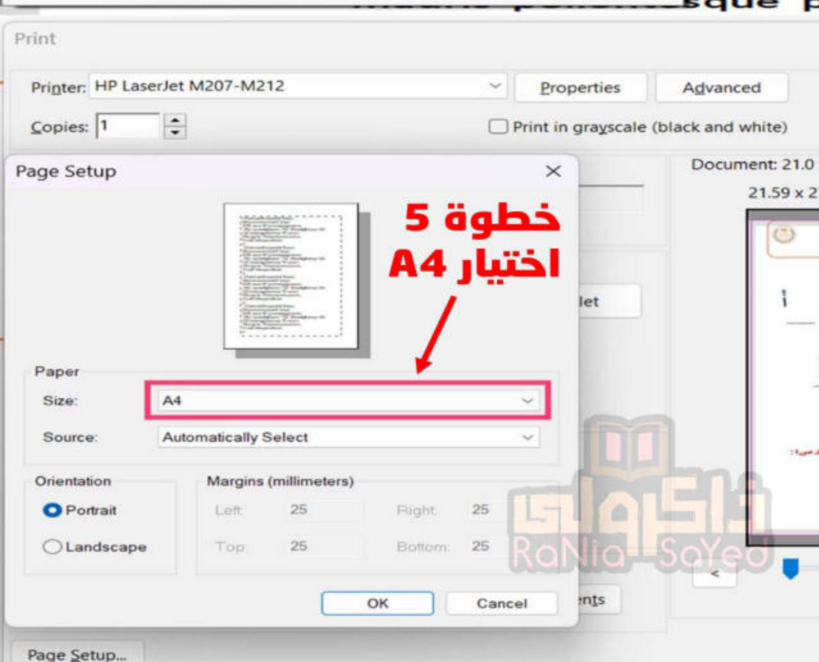
   Diabetes mellitus disease.

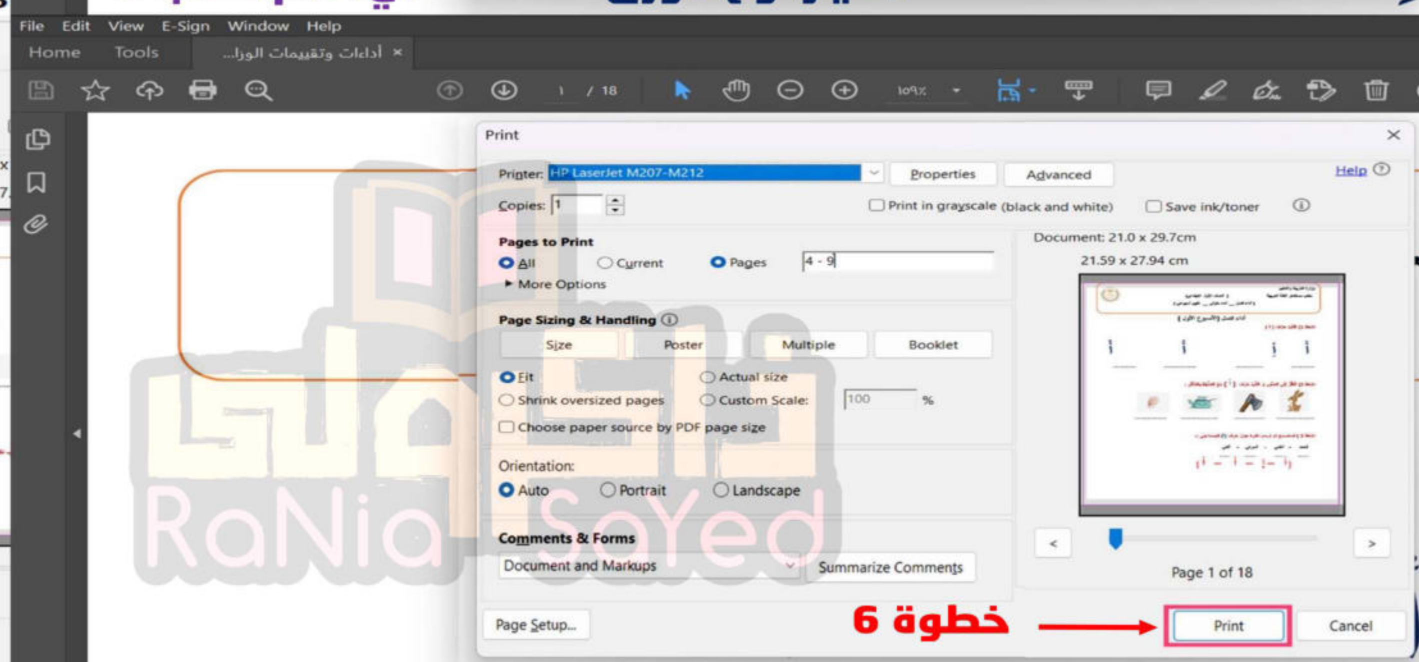
كيفية طباعة صفحات معينة من ملف معين

مثلا ازاى نطبع الصفحات من صفحة 4 الى صفحة 9









امتحانات رقم (2)

الترم الثانى





محافظة القاهرة
مديرية التربية و التعليم

القاهرة
مديرية التربية والتعليم
Directorate Of Education In Cairo

نموذج استرشادي لامتحان إتمام الدراسة بمرحلة التعليم الأساسي

الفصل الدراسي الثاني 2024 / 2025 م

المادة : .علوم (تراجم لغة انجليزية)..

التاريخ : .... / .... / 2025 م

زمن الإجابة : ....ساعتان...

عدد أوراق الإجابة (5) ورقات بخلاف الغلاف

و على الطالب مسئولية المراجعة

و التأكد من ذلك قبل تسليم الكراسة

في نهاية الوقت المخصص للإجابة

رقم السؤال	الدرجة رقما	الدرجة كتابة	التوقيع	
			المقدر	المراجع
...... :				
...... :				
...... :				
...... :				
...... :				
المجموع				

مجموع الدرجات

رقم المراقبة

نموذج استرشادى

قطع

نموذج استرشادي امتحان إتمام الدراسة بمرحلة التعليم الأساسي

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في نهاية الوقت المخصص للإجابة

رقم المراقبة

الإدارة التعليمية : ....

اسم الطالب رباعيا : ....

المدرســـــــــة : ....

رقم الجلوس : ....

توقيع الملاحظين بصحة بيانات الطالب

كما وردت رقم جلوس الطالب

و مطابقة عدد أوراق كراسة الإجابة عند

استلامها من الطالب

توقيع الملاحظين :

1 - ....

2 - ....

غير مصرح بالكتابة
في هذه الصفحة

Question 1:

(A) Complete the following:

1- ..... is used to measure electrical potential difference.

2- At the beginning of a chemical reaction, the concentration of the products is ....%.

3- Iron rusting is a result of chemical reactions...................

(B) What happens in the following cases:

1- Reducing the length of an electrical resistance wire relative to the current intensity

....

....

2- Deficiency in growth hormone secretion from the pituitary gland during childhood

....

....

3- A person is exposed to a frightening situation, such as an attack by a vicious dog

....

....

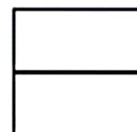
(C) Explain with balanced symbolic equations the effect of heat on each of the following:

1 - Green copper carbonate

....

2 - Red mercuric oxide

....



Question 2:

(A) Write the scientific term for the following statements:

1- The amount of electricity flowing through a cross-section of a conductor in one second.
(..)

2- Arrangement of the metallic elements in descending order of their chemical activity.
(...)

3- The science that studies the transmission of hereditary traits from one generation to the next, by studying the similarities and differences between parents and offspring
(..)

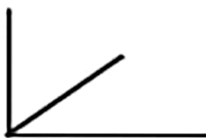
B) Give reasons for the following:

1- Some circuits have a sliding rheostat.
....

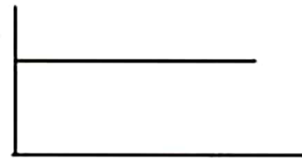
2- Ionic compounds react faster than covalent compounds.
....

3- Magnesium replaces copper in its salt solutions, but the reverse does not occur.
....

(C) 1- Explain the method of connecting the cells through the following figures:

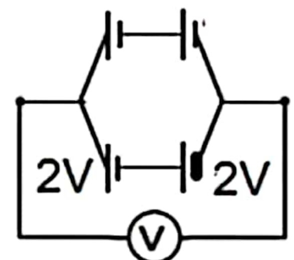


connection in ....



connection in ....

2) Calculate the electromotive force in the opposite electrical circuit:



....

....

....

Question 3:

(A) Choose the correct answer (by shading the letter that indicates the answer):

1- Calcitonin is secreted by .....

(A) Pancreas

(B) Liver

(C) Thyroid gland

(D) Pituitary gland

2- The reaction $Cl_2 + 2e^- \longrightarrow 2Cl$ represents the process of ....

(A) Oxidation

(B) Reduction

(C) Decomposition

(D) Substitution

3- When copper filings is added to dilute hydrochloric acid, ... is formed

(A) Copper hydroxide

(B) Copper carbonate

(C) Copper chloride

(D) No reaction occurs

(B) Extract the odd word out in each of the following:

1 - Nature of the reactants - Concentration of the products - Reaction temperature - Concentration of the reactants

The odd word out (............................)

2 - Ampere - Ohmmeter - Voltmeter - Ammeter

The odd word out (............................)

3 - Detached ear lobes - Soft hair – curly hair - Wide eyes

The odd word out (............................)

(C) Answer the following:

1- Explain on genetic bases, the result of crossing two pea plants, one of which is tall-stemmed and pure(TT), and the other is short-stemmed (tt) illustrating the genetic composition of the resulting generation

....

....

....

....

2 - Calculate the time required for passing an electric charge of **24** coulombs to a conductor the current intensity pass through of **2** amperes.

....

....

....

Question 4:

(A) Put (√) or (×)In front of the following statements:

1- In a dynamo, light energy is converted into electrical energy ( )

2- An ohmmeter is used to measure electrical resistance in an electrical circuit ( )

3- Most metal sulphates decompose into metal oxide and carbon dioxide ( )

(B) Mention the importance of each of the following:

1 - Oxidase enzyme

....

2 - Calcitonin hormone

....

3 - Alternating current

....

C - Compare between:

1- Oxidation and reduction in terms of definition?

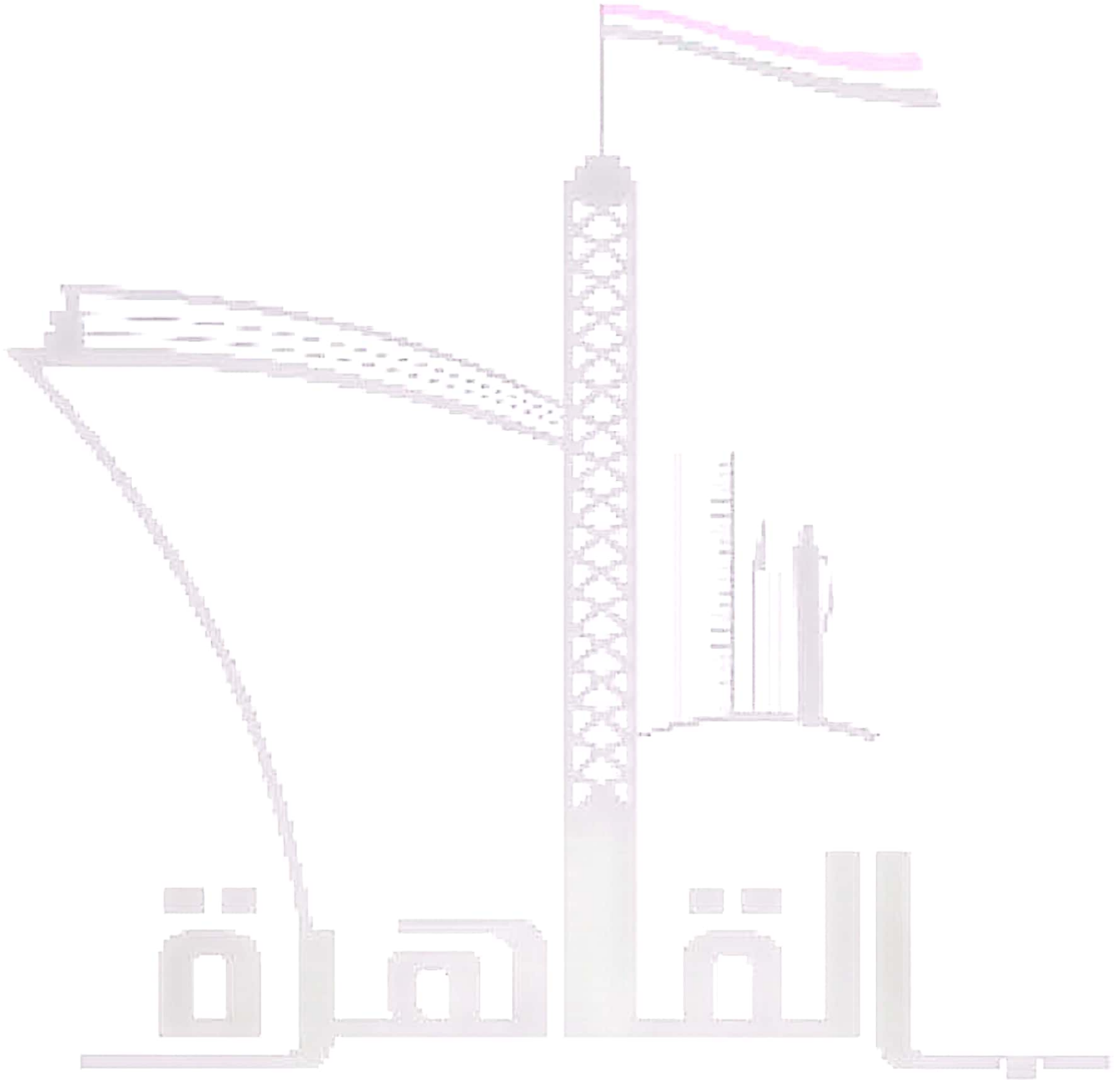
Point of comparison	Oxidation	Reduction
Definition	....	....

2- Genetic traits and acquired traits in terms of definition - and give one example of each?

Point of comparison	Genetic traits	Acquired traits
Definition	....	....
Example	....	....

(الأسئلة انتهت)

مسودة


القاهرة
مديرية التربية والتعليم
Directorate Of Education In Cairo

Model answer

Question 1:

(A) Complete the following:

1- voltmeter

2- zero

3- are slow

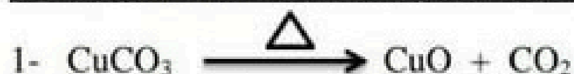
(B) What happens in the following cases:

1- the current intensity increases.

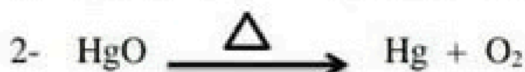
2- the body stops growing so the person becomes a dwarf (dwarfism).

3- secretion of adrenalin hormone.

(C) Explain with balanced symbolic equations the effect of heat on each of the following:



1- $CuCO_3 \xrightarrow{\Delta} CuO + CO_2$



2- $HgO \xrightarrow{\Delta} Hg + O_2$

Question 2:

(A) Write the scientific term for the following statements:

1- Coulomb.
2- Chemical activity series .
3- Genetics

B) Give reasons for the following:

1- To adjust the value of the current intensity and potential difference in the diffwerent parts of the circuit.
2- Because they decompose into ions.
3- Because magnesium is more active than copper.

(C) 1- Explain the method of connecting the cells through the following figures:

In series - on parallel

2- e.m.f. = 2 + 2 = 4 volts

Question 3:

(A) Choose the correct answer (by shading the letter that indicates the answer):

1- (C) Thyroid gland

2- (B) Reduction

3 - (D) No reaction occurs

(B) Extract the odd word out in each of the following:

1- Reaction temperature

2- Ampere

3 - straight hair

(C) Answer the following:

1- p. TT x tt

g. T T t t

f. Tt Tt Tt Tt

2- $t = \frac{q}{I}$ $t = \frac{24}{2}$ = 12 sec.

Question 4:

(A) Put (√) or (×)In front of the following statements:

1- (X)

2- (√)

3- (X)

(B) Mention the importance of each of the following:

1- catalyst

2- controls the calcium levels in the blood.

3 – lightening houses , streets and operating electric appliances.

C - Compare between:

1- Oxidation and reduction in terms of definition?

Point of comparison	Oxidation	Reduction
Definition	A chemical process which increases O_2 percentage or decreases H_2 percentage in substance.	A chemical process which increases H_2 percentage or decreases O_2 percentage in substance.

2- Hereditary traits and acquired traits in terms of definition - and give one example of each?

Point of comparison	Hereditary traits	Acquired traits
Definition	Traits are transmitted from one generation to another.	Traits are not transmitted from one generation to another.
Example	Colour of the hair or the colour of skin or No. of fingers or blood group ……etc.	Swimming



مديرية التربية والتعليم بالإسكندرية

نموذج استرشادي لامتحان إتمام شهادة الدراسة بمرحلة التعليم الأساسي للعام الدراسي

2024 / 2025 م

الفصل الدراسي الثاني

الزمن : ساعتان | المادة : العلوم

مجموع الدرجات

الدرجة بالحروف

رقم المراقبة

السؤال	الدرجة	الدرجة بالكتابة	توقيع المقدر	السؤال	الدرجة	الدرجة بالكتابة	توقيع المقدر
1				17			
2				18			
3				19			
4				20			
5				21			
6				22			
7				23			
8				24			
9				25			
10				26			
11				27			
12				28			
13				29			
14				30			
15				31			
16				32			
المجموع الكلي							

جمعه .... راجع الجمع ....

مديرية التربية والتعليم بالإسكندرية

التعليم العام

نموذج استرشادي لامتحان إتمام شهادة الدراسة بمرحلة التعليم الأساسي للعام الدراسي **2025/2024**م

الفصل الدراسي الثاني

المادة : العلوم (استرشادي فصل دراسي ثان)

اسم الطالب -------------- رقم الجلوس----------------

Put (√) or (x) in the following :

1- Mercuric oxide decopose by heating hnto mercury and oxygen gas evolves (   )

2- Direct current used in light houses and streets (   )

3- ionic compounds are fast in their reactions than covalent compounds (   )

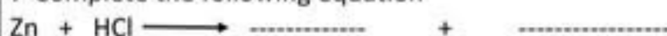
4- alternating current can transport to long distance and short one (   )

5- What happen when

connect ammeter parallel in electric circuit

6- Add Copper to dill hydrochloric acid

7-Complete the following equation



Mention the kind of reaction ?

<u>Give reason for the following ;</u>

8-using of electric resistance in electric circuit

9- pituitary gland is called master gland

10- when connect two electric cells each one has 3 volt on parallel , the E.m.f equal 3volt

----

11- some persons suffer from giantism

12-What is meant by ;

Electric current intensity of conductor = 50 ampere

Choose the correct answer

13------------ current is represented by straight line parallel to the time axis

(direct – alternating - direcr and alternating)

14---------------------process happens to sodium atom in

$Na \longrightarrow Na^{+}$

(oxidation – reduction - reducing agent)

15- The traits that disappear in first generation and appear in second generation

(dominant –recessive –acquird)

Write the scientific term

16- The opposition that the electric current faces during its passing through a conductor ( )

17- flow of electric charges in conductor ( )

18- Gas produce from reaction between $Na_2(Co_3)$ with HCl (dill) ( )

19- Cross out the odd word in the following statement

The mass of products –the concentration of the reactants – the temperature – the catalyst

( )

Mention the physical quantity which measured by the following

20-Joule / volt .second ( )(

21- joule / ampere. secomd ( )

22- Calculate the quantity of electricity which produced from passing an electric current intensity 18 ampere through 300 second

----

23- Calculate the electric resistance of conductor if the electric current intensity 0.2 ampere and potential difference 220 volt --

----

24-Give reason

Increase the speed of reaction by increase the concentration of reactants

----

25-Complete the following :

From the using of nuclear energy in ---------------------field ,improve some plant races

---

26-What happen when

Increase the resistance of conductor to double concern to the potential difference of the conductor

----

Compare between the following (mention one reason)

28- Natural radioactivity and artificial radioactivity

Natural radioactivity	artificial radioactivity

29- reducing agent – oxidizing agent

reducing agent	oxidising agent

30 -The following equation represent decoposition of sodium azid in air bag Na

2Na + 

*complete the equation

*mention the kind of reaction

31-Choose from column (B) what suits it in column (A)

(A) Hormone	(B) Function
1- Growth	a- Enables the male characters to appear
2- Testosterone	b- Activates thyroid gland
3- Progesterone	c- Promotes the growth of endometrium

32 (A) Compare between insulin hormone and glucagon hormone According to its important

----

(B) If a black mouse BB is crossed with a brown female mouse bb . M ention the colours of resulting offspring in firest generation and second generation

انتهت الاسئله

محافظة البحيرة

مديرية التربية والتعليم

توجيه عام العلوم

نموذج استرشادي علوم فصل دراسي ثانى 2025

المجموعة	من	الي	الدرجة	التوقيع	
				المقدر	المراجع
الاولي	1	8			
الثانية	9	16			
الثالثة	17	24			
الرابعة	25	32			
المجموع					

الاسم	
رقم الجلوس	
المدرسة	
الادارة	
المحافظة	
اليوم	
التاريخ	

تعليمات هامة: عزيزى الطالب

اقرأ السؤال بعناية، وفكر فيه جيدا قبل البدء في اجابته 1 -
2 -أجب عن جميع الاسئلة لا تترك أي سؤال دون إجابته. 2 -
3 -عند إجابتك للأسئلة المقالية، أجب فيما لا يزيد عن المساحة المحددة لكل سؤال
-4 - اجابتك عن الأسئلة الموضوعية
لا تكرر الاجابة عن الأسئلة الموضوعية (الصواب والخطأ أو الاختيار من متعدد(
5 – عدد اسئلة الكتيب 32 سؤال

6 – عدد صفحات الكتيب 7 صفحة

7 – تأكد من ترقيم الاسئلة وعدد الصفحات فهى مسئوليتك

8 – زمن الاجابة ساعتان

<u>Science Guidance, Second Semester, 25</u>

Model (A)

<u>First group</u>

1) <u>Study the following reaction then answer</u> :



$$H_2 + Cuo \rightarrow Cu + H_2O$$

A- Oxidizing agent is........................... B) Reducing agent is ....

<u>2) How do you explain:</u>The rate of a chemical reaction increases with increasing concentration of the reactants.

...

<u>3) Complete the following sentence:</u>

In Mendel's experiments, he removed the stamens from flowers to prevent ……………………..pollination.

<u>4) Write the scientific term that indicates:</u>

The amount of charge transferred by a constant current of 1 ampere per second. (..............................)

5) Explain with a balanced symbolic equation the reaction of zinc with dilute hydrochloric acid. Mention the type of interaction?

...

...

<u>6) Correct the underlined:</u>

In an electric generator, <u>chemical energy</u> is converted into electrical energy.

...

<u>7) Extract the odd word then write what connects the rest of the words:</u>

color pod / Flower position / Root length / Flower color.

...

<u>8) Give reasons for the following:</u>

A red precipitate is formed when magnesium is added to copper sulphate solution.

...

<u>The second group</u>

9) You have 4 similar electric dry cell, each with an electromotive force of 1.5 volts. Explain with the drawing how to connect them together to obtain a battery with an electromotive force of 1.5 volts for each:

a) 4.5 volts



b) 6 volts



<u>10) Choose the correct answer from the brackets:</u>

The phenomenon of radioactivity was discovered by the scientist ....

(Ohm - Becquerel - Ampere)

<u>11) Give reasons for the following:</u>

Learning to walk in children is not considered a hereditary trait.

..

<u>12) Write one example of:</u>

Chemical reactions take millions of years. (...............)

<u>13) What are the results of: -</u>

- Mating two pure individuals in a pair of their contrasting traits with respect to the traits of the first and second generations according to Mendel's first law.

..

..

<u>14) Put the word (True) or the word (False) in front of the following statement:</u>

Dwarfism results from a deficiency in the secretion of the insulin hormone in the human body.

15) Calculate the resistance of an electric wire with a potential difference of 4 volts between its ends when an electric charge of 6 coulombs passes through it for 3 seconds.

..

..

16) mention the physical quantity measured in volts/amperes.

..

(The third group)

17) An iron wire with a mass of 10 grams and iron filings with the same mass are left in a humid place. Which one rusts faster? Give an explanation.

...

18) Using the following materials:(Dilute hydrochloric acid - sodium chloride solution - silver nitrate solution - sodium carbonate salt)

Explain with balanced symbolic equations how to obtain:

- **white precipitate**

  ...

- **Gas that turbid clear limewater**

...

19) What are the results of:

- The number of neutrons in the nucleus of an element exceeds the number required for its stability?

...

20) Compare between alternating current and direct current:

Comparison point	direct current	alternating current

21) Complete the following sentences:

When the amount of iodine in food decreases, the secretion of the.............................. hormone decreases.

22) Explain, on genetic grounds, the result of mating a male and female fruit fly, both of which have long wings. The result was 45 long-winged individuals and 15 short-winged individuals. Note that the long wing gene is represented by the symbol(T) the short wing gene is represented with the symbol (t).

...

...

23) What is meant by:

- Chemical activity series.

...

24) To whom are the following works attributed:

-Design model of DNA ………………………………………….

....

(Group Four)

25) What is the name of the disease resulting from the inability of the pancreas to secrete the hormone insulin?

....

26) Write the scientific term:

A substance formed by a gene that is responsible for a chemical reaction to form a protein and produce a genetic trait.

....

27) Mention one importance for each of the following:

- Voltmeter.

....

28) Study the following two equations and then answer:

1) A (blue substance) → B + SO_3 ↑

2) B + H_2 → C + H_2O

- Write the chemical formulas for each of the following:(A), (B), (C)

....

What process happened to the matter (B) In reaction (2) ?

....

29) What is meant by

- Hybrid individual.

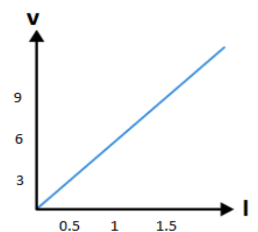
....

30) Correct the underlined part in the following sentence:

Testosterone hormone stimulates the growth of the endometrium.

....

31) From the following figure, complete:



1- Resistance value is ....

2- From the relationship, deduce a definition of electrical resistance.

....

32) What happens to the human body when the number of red blood cells decreases as a result of exposure to nuclear radiation?

....

مســــودة

محافظة البحيرة

مديرية التربية والتعليم

توجيه عام العلوم

نموذج استرشادي علوم فصل دراسى ثانى 2025

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الاسم	
رقم الجلوس	
المدرسة	
الادارة	
المحافظة	
اليوم	
التاريخ	

تعليمات هامة: عزيزي الطالب

1 - اقرأ السؤال بعناية، وفكر فيه جيدا قبل البدء في اجابته

2 -. أجب عن جميع الاسئلة لا تترك أي سؤال دون إجابته2 -

3 -عند إجابتك للأسئلة المقالية، أجب فيما لا يزيد عن المساحة المحددة لكل سؤال

4 - اجابتك عن الأسئلة الموضوعية.

لا تكرر الاجابة عن الأسئلة الموضوعية (الصواب والخطأ أو الاختيار من متعدد)

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8 – زمن الاجابة ساعتان

Science Guidance, Second Semester, 25

Answer the following questions

1- Choose the correct answer for the following statement:

The genetic struture of a pea plant with yellow, wrinkled seeds is .....

c)yyrr   d)YYRR   b)YYrr   a)yyRR

2 :-Give reasons for the following:

1-The rate of dissociation of ionic compounds is greater than the rate of dissociation of covalent compounds.

...

...

Q3:Compare between AC and DC

In terms of source and uses

	direct current	alternating current
Source		
Uses		

4-Write the scientific term that represents the following phrase:

The reaction of acids with alkalis to form salt and water (   )

5-Sodium hydroxide solution reacts with copper sulphate solution.

A-Write the chemical equation that indicates this?

....

B-How is the reaction rate measured practically?

....

6:-Exclude the different word and then mention what connects the rest words.

Coulomb / sec - Volt - Ampere - $\frac{volt}{ohm}$

....

7-How do you explain? Mendel's choosing for pea plants to conduct his experiments

....

....

8 Write the balanced equation for the decomposition of nitrogen pentoxide gas?

....

....

9-The hormone .... is responsible for the appearance of secondary sexual characteristics in males.

a) Progesterone b) estrogen c) Testosterone d) Insulin

10- Give reasons for the following:

The refrigerator is used to preserve food.

....

....

11:-What is meant by neutralization reactions?

....

....

12- Give reasons for the following: Radiation has genetic effects.

....

....

13- Choose the correct answer from the following:

The .... trait is pure always

a) acquired b) genetic c) dominant d) recessive

14- Correct the underlined part in the following sentence.

Genes carry the instructions for building carbohydrates that are responsible for appearance genetic traits.

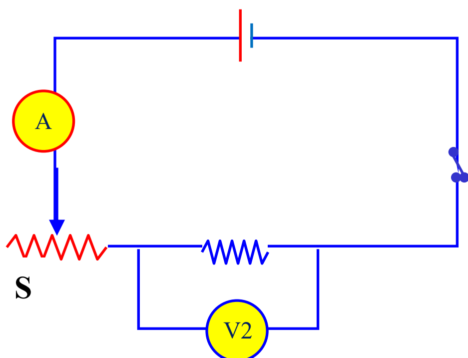
....

15-Study the opposite figure and then answer:

What happens to the ammeter reading when moving Slider to point S?

....

....



16- Use symbols to express the result of mating a black rabbit (Bb) with a brown female (bb)?

....

……

……

17-Choose the correct answer from the following:

The hormone that regulates blood sugar levels is……………………

a) Insulin **b) Thyroxine** **c) Adrenaline** **d) Glucagon**

18-From the equation in front of you, explain which is the reducing agent and which is the oxidizing agent, then state the reason.



$Mg + CuSO_4 \longrightarrow MgSO_4 + Cu$

The reducing agent is……………….because …………………….

The oxidizing agent is………………..because ……………………

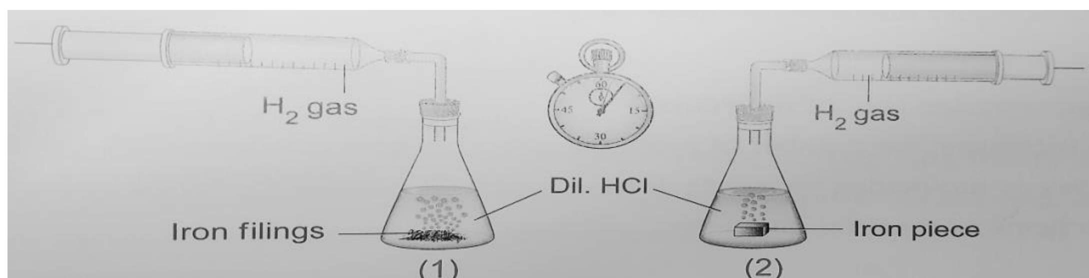
19- Write the name of the scientific term for the following phrase:

A substance that changes the rate of a chemical reaction without changing.

…………………………………………………………

20-

From the following figure, compare the amount of gas produced at the end of the reaction in the two cases when the same amounts of acid and iron were used.



……

……

……

21:-

What is meant by

Transformer.?……………………………………………………………………………

……………………………………………………………………………………………………

22:-Choose the correct answer from the given answers.

You have three identical electrical poles, each with a voltage of 6 volts, all connected in parallel, so the total voltage is

a) 6 **b) 18** **c) 9** **d) 12**

23- What happens in the following cases?

Hydrochloric acid reacts with sodium carbonate?

……

……

24:-How do you explain:
A red precipitate is formed when a piece of magnesium is added to a copper sulphate solution.

……

……

25:What is the name of :

The device used to measure the electrical potential difference in an electrical circuit?

……

……

26:- Calculate the potential difference between the two ends of a conductor with a resistance of 20 ohms if the quantity of electricity is 40 coulombs in a time of 5 seconds?

……

……

27_You have 3 electric cells. The value of the first cell and the second cell is 3 volts, and the third cell is 6 volts. Explain with a drawing only how to get a battery with (e .m .f) of 6 volts.?



28- Correct the underline in the following phrase

A person suffers from a dwarfism due to a decrease in the secretion of insulin hormone .

……………………………………………………………………………………………………

29-Write the scientific term for the following phrase:

The resistance that electric current faces as it flows through a conductor.

……………………………………………………………………………………………………

30:-Calculate the current intensity resulting from a quantity of electricity of 100 coulombs for one minute?

……………………………………………………………………………………………………

……………………………………………………………………………………………………

31: Give one example of each.

A) A dominant trait in humans

……………………………………………………………………………………………………

b) A recessive trait in humans

....

<u>32-Put a check mark (√) or (X)mark in front of the following statement</u>:
Iron enters in the structure of thyroxine hormone.

Draft

....
....
....
....
.. ..
....
....
....
....
....
....
....
....

Port Said governorate	Science Exam- third Year Prep
Educational directorate	2nd term Model exam
Science Supervisory	Time: 2 hours

Answer all the following questions

Question (1)

A) pout true or false in front of the next sentences :

1. 1- the speed of chemical reactions decreases by increasing the temperature. ( )
2. The maximum safe dosage for publics is 30 sievert per year. ( )
3. Formation of silvery substance on heating a test tube with red mercuric oxide ( )

B) what happens in the fooling cases: -

1- increasing the length of the wire (regarding to the electric current intensity).

……

……

2- approaching burning match to the gas produce during heating red mercuric oxide.

……

……

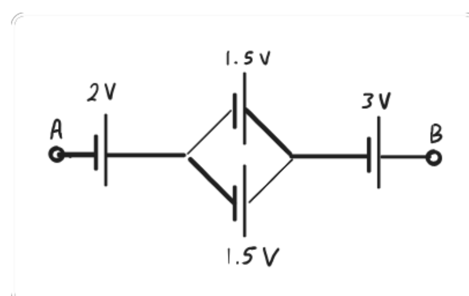
3- An individual the receiver 2 recessive allele (gene) from the both parents.

……

……

C)

1- Calculate the electromotive force between points (A and B):-



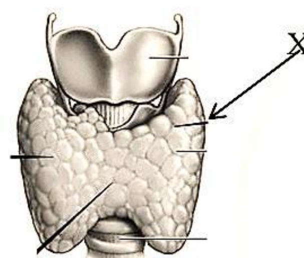
……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

2- After studding the next figure: -



(1) Whare in human body that gland locates

……………………………………………………………………

(2) What happens in case of occurrence of a disorder in this gland.

……………………………………………………………………

……………………………………………………………………

……

……

Question (2)

A) Write the scientific term of each of the following :

1-The quantity of electricity flowing through a cross-section of a conductor in one second. (……………………………………)

2-The arrangement of metals in a descending order according to the degree of their chemical activity. (……………………………………)

3- Ductless glands that secrete their hormones directly in blood. (……………………………………)

B) answer the following :

1- What are the properties of the catalyst (write 2 properties only) .

……………………………………………………………………………………………………

……………………………………………………………………………………………………

2- Exoplanet the transfer of electric charges from one conductor to another whin they are connected.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

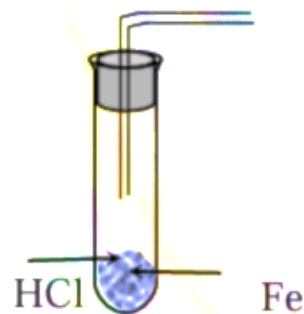
3- What is the function of Insulin hormone.

……………………………………………………………………………………………………

……………………………………………………………………………………………………

C

1- write down the balanced chemical equation represent the chemical reaction in the shown finger:



……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

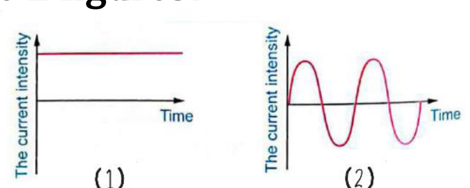
2- in the 2 opposite figures: -

(1) What is the type of electric current in the 2 figures?

……………………………………………………

……………………………………………………

……………………………………………………



(2) What is the source of generation of each of them?

……………………………………………………………………………………………………

Question (3)

A) complete the following statements:

1- ……………………….. apparatus is used to control the electric resistance by moving its ………………. .

2- At the beginning of the chemical reaction, the concentration of the products equal ………. %.

3- the change of the chemical composition of blood hemoglobin is an …………….. effect of the nuclear radiation

B) Compare between each of the following:

1- the effect of heat on **metal oxide** and **Metal hydroxide**.

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

2- **Dominant trait** and **recessive trait** (regarding to its definition).

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

3- **Ammeter** and **voltmeter** (regarding to the way of connection in the electric circuit).

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

C)

1- Explain on genetic bases the results of crossing two pea plants, one of them red flowers hybrid and the other white flowers (knowing that the red flower trait (R) dominate over the white flower trait (r).

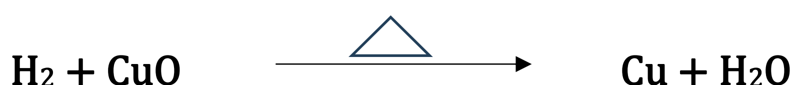
………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………………

2- In the following chemical equation :-



$$H_2 + CuO \xrightarrow{\Delta} Cu + H_2O$$

What is the oxidizing agent and reducing agent

………………………………………………………………………………………………………

Question (4)

A) Choose the correct answer from the following :

1- The reading of voltmeter connected between the 2 poles of a battery in an opened circuit refers to ………………… .

a) Current intensity b) potential deference c) resistance d) electromotive force

2- According to Mendel's 1st law, the recessive trait appears in the second generation with the retinue ………………… .

a) 25% b) 50% c) 75% d) 100

3- The measuring unit of concentration is ………………… .

a) Mole. liter b) Mole/liter c) Mole.sec d) Mole/sec

B) mention one example for each of the following:

1) Acquired trait.

……

2) radioactive element.

……

3) A metal can replace Hydrogen in water.

……

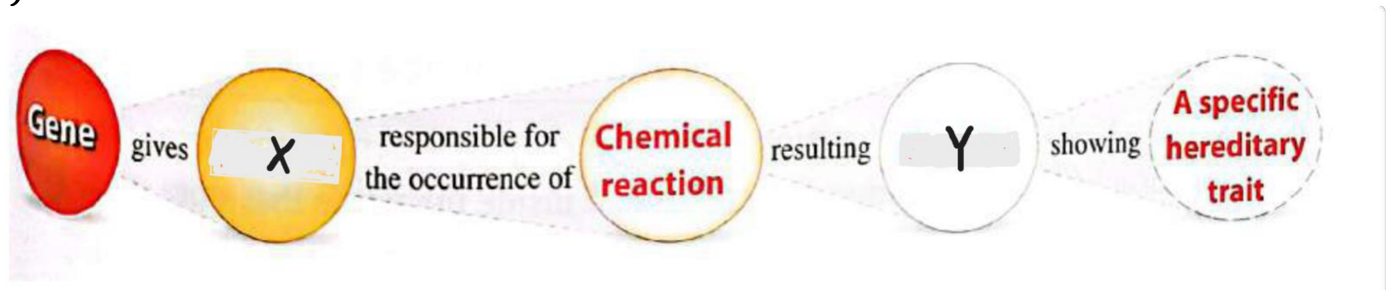
C) :

1) what is meant by: The potential deference between 2 ends of a conductor equals 5 volts

……

……

2)



From the previous diagram :-

(X) refers to ……………………………… (Y) refers to ……………………………

End of questions

Port Said governorate	Science Exam- third Year Prep
Educational directorate	2nd term Model exam
Science Supervisory	Time: 2 hours

Model answer on the 3rd prep.
2nd tearm Science exam

Quinton (1)

Quinton	Answer	mark
Q1 (A)	1) X	1
	2) X	1
	3) √	1
Q1 (B)	1) By increasing the length of the wire, the electric resistance increases	1
	2) Increasing the flame of the Mach	1
	3) The recessive trait appears on the individual	1
Q1 (C)	1) $E_{battery} = 3 + 1.5 + 2 = 6.5$ volts	2
	2) It is located in the front surface of the neck on both sides of the trachea. the disorder leads to the inability to release the energy from food and disturbance in the level of calcium in blood.	2

Port Said governorate	Science Exam- third Year Prep
Educational directorate	2nd term Model exam
Science Supervisory	Time: 2 hours

Quinton (2)

Quinton	Answer	mark
Q2 (A)	1) Electric current intensity	1
	2) Chemical activity serious	1
	3) Endocrine glands	1
Q2 (B)	1) They change the speed of reaction but don 't affect either its beginning or stopping. 2) They are used in a few amounts which are often enough to complete the reaction. 3) They are bonded to reactants during the reaction but get separated from them rapidly (quickly) after formation the resultants at the end of the reaction. 4) They decrease the energy needed for the reaction. 5) No chemical changes or decrease in mass occurs to the catalyst after ending the reaction. **(only 2 points)**	1
	2- due to presence of potential deference between them	1
	3- Stimulate the Body cells to use glucose as a source of energy. Stimulate liver cells to store excess glucose sugar in the body in the form of glycogen.	1
Q2 (C)	1) $Fe + 2HCl \longrightarrow FeCl_2 + H_2 \uparrow$	2
	2) Fig(1) direct current – Fig (2) alternating current The source of direct current is the electrochemical cells (dry cell) . The source of alternating current is the Dynamo.	2

Port Said governorate	Science Exam- third Year Prep
Educational directorate	2^{nd} term Model exam
Science Supervisory	Time: 2 hours

Quinton (3)

Quinton	Answer	mark
Q3 (A)	1) Variable resistant (sliding rheostat) - slider	1
	2) 0	1
	3) Cellular	1
Q3 (B)	1) • Metal oxide decomposes by heat into **metal** and **oxygen** • Metal hydroxide decomposes by heat into **metal oxide** and **water**	1
	2) • Dominant trait: It is the trait that appears when aggregation of two similar factors (two genes) of the dominant trait, or one factor (gene) of the dominant trait with a factor (gene) of the recessive trail • Recessive trait: It is the trait t a appears only when aggregation of two similar factors (two genes) of he recessive trait.	1
	3) • Ammeter connected in series. • voltmeter connected in parallel	1
Q3 (C)	Pea plant of red flowers (hybrid) — Pea plant of white flowers (pure) P Parents: Rr × rr G Gametes: R, r, r, r F The produced generation: Rr, Rr, rr, rr 50% hybrid red flowers — 50% white flowers	2
	2) H_2 Is the reducing agent and CuO is the oxidizing agent	2

Port Said governorate	Science Exam- third Year Prep
Educational directorate	2nd term Model exam
Science Supervisory	Time: 2 hours

Quinton (4)

Quinton	Answer	mark
Q4 (A)	1) (D) Electromotive force.	1
	2) (A) 25%	1
	3) (B) mol/letre	1
Q4 (B)	1) Scale of playing football – speaking many languages – learning walking in children	1
	2) Radium - Selenium - Zirconium - Uranium - Cesium – Polonium – Rubidium.	1
	3) Potassium - Sodium - Barium - Calcium - Magnesium - Aluminum - zinc - Iron - lead	1
Q4 (C)	1) It means that the work done to transfer an amount of charge of one coulomb equal 5 joules.	2
	2) (X) Enzyme (Y) Protein	2

حمل الآن

مجانا وحصريا

امتحانات رقم (3)

الترم الثانى





امتحان تجريبي شهادة اتمام الشهادة الاعدادية

MINISTRY OF EDUCATION AND TECHNICAL EDUCATION
وزارة التربية والتعليم والتعليم الفني

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

1

زمن الاجابة :ساعتان

وزارة التربية والتعليم
مديرية التربية والتعليم بالمحافظة

الاسئلة: من .. إلي	الدرجة	التوقيع	
		المقدر	المرجع

عدد أوراق الامتحان (١٤) بخلاف الغلاف وعلي الطلاب مسئولية المراجعة والتأكد من ذلك قبل تسليم الكراسة

مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف::..

امضاءات المراجعين::..

رقم المراقبة

وزارة التربية والتعليم

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

التاريخ: / / ٢٠٢٥

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1

نموذج ثالثة اعدادي

زمن الاجابة :ساعتان

اسم الطالب رباعياً:..

المدرسة:.......................... الادارة:..........................

رقم الجلوس .... المحافظة :..........................

توقيع الملاحظين
بصحة البيانات ومطابقة
عدد اوراق كراسة الاجابة
عند تسلمها من الطالب

Question 1

A) Write the scientific term for each of the following statements:

1- Breaking molecules of the reactants and the forming of new products.

(....)

2- Chemical process where atom gains one or more electron.

(....)

3- Amount of electric charges that flow in a conductor in a certain time.

(....)

4- The characters ready transmitted from one generation to another.

(....)

5- A gland secretes a hormone to regulate growth of the human sexual organs.

(....)

6- Resistance of a conductor allows of an electric current of (1) Ampere when the potential difference between its two ends is 1 Volt

(....)

....

B) Illustrate by balanced chemical equations the following reactions:

1- The reaction between hydrochloric acid and sodium hydroxide.

....

....

2- Adding silver nitrate solution to sodium chloride solution.

....

....

.C) You have four similar electric cells, the potential difference of each 1.2 volt, and show by diagram the method of connection together to obtain a battery its electromotive force

a -1.2 volt   b- 4.8 volt   c- 2.4 volt

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Question 2

......A) Define each of the following:

1- Electric current intensity.

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2- Diabetes

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B) By using symbolic formulae complete and balance the following equations :

1- .... = 2Hg + O2

2- 2Na NO3 = ... + O2

3- Na OH + ... = 2Na Cl + H2O

C) What is the scientific idea on which:

-the air bag in cars is dew signed on the occurrence of the car crash they get vacuumed and sodium nitride decomposes forming nitrogen that fills the air bag on crashing.

2 Na3N = 2Na + 3N2

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Question 3

A) What would happen?

1- When thyroxin hormone increases (liberation of energy increases)

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2-The reading of both ammeter and voltmeter in electric circuit to achieve ohm's law if the electric resistance is spoiled.

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B) Complete the following sentences:

1-The current flow through a conductor is ....proportional to resistance

2-The unit used to measure the current intensity is known as ....

3- During ....reactions, compound breaks by heat to its simple components.

4- Hormones are directly secreted into the blood stream by. ....

5- Thyroxin is a ....that regulates food assimilation in body ....

....

....

....

C) Compare between the following:

Heating of metal oxide and metal hydroxide.

Heating of metal oxide	metal hydroxide.

Question 4

A) Identify the process of oxidization, reduction, oxidizing factor and reducing factor in each of the following reaction:



$2Cr^{+3} + 3Zn \longrightarrow 2Cr + 3Zn^{+2}$

....

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B) Choose the correct answer for each of the following statements;

1-The ....is used to measure the electromotive force of a battery.

a-Voltmeter   b- Ammeter   c- Rheostat

2- When copper hydroxide is heated we obtain:

a- Copper carbonate and water   b- Copper oxide and water

c- Copper and hydrogen   d- Copper oxide and hydrogen

3- The substitution reactions take place when there is:

a- Less active element replaces more active element

b- Less active compound replaces more active compound

c- More active element replaces less active element

d- More active compound replaces less active compound.

C) Give reasons for the following:

1-It is better to use the alternating current rather than the direct current.

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2- Voltammeter is connected to both poles of battery in electric circuit.

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امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

2

زمن الاجابة :ساعتان

وزارة التربية والتعليم

مديرية التربية والتعليم بالمحافظة

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الاسئلة: من .. إلي	الدرجة	التوقيع	
		المقدر	المرجع

مجموع الدرجات

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مجموع الدرجات بالحروف:...

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وزارة التربية والتعليم

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التاريخ: / / ٢٠٢٥

2

نموذج ثالثة اعدادي

زمن الاجابة :ساعتان

اسم الطالب رباعياً:...

المدرسة:................................الادارة:...

رقم الجلوس .... المحافظة ....

توقيع الملاحظين بصحة البيانات ومطابقة عدد اوراق كراسة الاجابة عند تسلمها من الطالب

Question 1

A) Choose the correct answer for each of the following statements;

1-The Sliding Rheostat used to change ....and

....in electric circuit.

a-The current intensity and potential difference

b- the resistance and potential difference

c- current intensity and resistance.

2- Hormone which controls percentage of calcium in the blood is

....hormone

a- calcitonin b-thyroxin c-insulin d-adrenalin

3- The electric potential difference is measured by...

a- ammeter b- ohmmeter c - voltmeter d -wattmeter

4 –When calcium carbonate is heated . ...is obtained

a – Calcium bicarbonate, and carbon dioxide

b – Calcium hydroxide and carbon dioxide

c – Calcium oxide and carbon monoxide

d – Calcium oxide and carbon dioxide

B) Give reasons for the following:

1- The stop of the body growth makes the person is dwarf

....

....

....

2- Calcium hydroxide is used in building works

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3- Mendel's selecting the pea plant to conduct his experiments.

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Question 2

A) Define each of the following:

1- Ohm's law

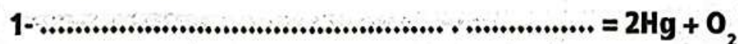
....

....

2-The gene it is

....

.... B) By using symbolic formulae complete and balance the following equations



1- .... = $2Hg + O_2$



2- $2NaNO_3$ = ...+ O_2

....

....

C) calculate quantity of electricity passed in a conductor its resistance 2200 ohm for two minutes when connected with electric source its electric potential 220 volt

....

....

Question 3

A) Mention the difference between each two of the following:

the connection of electric cells in series and in parallel from the point of the value of produced electromotive force

the connection of electric cells in series	the connection of electric cells in parallel

B) What is the scientific idea for each of the following?

1-The dominance of curried hair character on straight hair character

....

....

2-The production of big fruits, more delicious and devoid خالية of seeds

....

....

C) Explain the following

Occurrence of effervescence on putting aluminum in diluted hydrochloric acid.

....

....

Question 4

A) Write the scientific term for each of the following statements:

1-A chemical message that controls and regulates the activities and functions of most of the body organs

(....)

2- Chemical process where atom gains one or more electron.

(....)

3- Obstruction of electric current in a conductor.

(....)

4-A device used to measure intensity of electric current.

(....)

B) Give reasons for the following:

1- Rheostat is used in some electric circuits.

....

....

2- The ability of bending the tongue is a dominant trait in the human being.

....

....

3- A red precipitate is formed when magnesium is added to copper sulphate

....

....






وزارة التربية والتعليم
مديرية التربية والتعليم بالمحافظة

MINISTRY OF EDUCATION AND TECHNICAL EDUCATION
وزارة التربية والتعليم والتعليم الفني

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

3

التاريخ: / /٢٠٢٥

زمن الاجابة :ساعتان

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الاسئلة: من .. إلي	الدرجة	التوقيع	
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مجموع الدرجات بالحروف:...

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وزارة التربية والتعليم

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

التاريخ: / /٢٠٢٥

زمن الاجابة :ساعتان

عدد أوراق الامتحان (١٤) بخلاف الغلاف وعلي الطلاب مسئولية المراجعة والتأكد من ذلك قبل تسليم الكراسة

3

نموذج ثالثة اعدادي

اسم الطالب رباعياً:..

المدرسة:..................................... الادارة:.......................................

رقم الجلوس .... المحافظة :.......................................

توقيع الملاحظين
بصحة البيانات ومطابقة
عدد اوراق كراسة الاجابة
عند تسلمها من الطالب

Question 1

A) Choose the correct answer for each of the following statements;

1- The Ammeter is used to measure ....in the electric circuit.

a-The potential difference b- the current intensity c- the resistance

2- The substitution reactions take place when there is:

a- Less active element replaces more active element

b- Less active compound replaces more active compound

c- More active element replaces less active element

d- More active compound replaces less active compound

3-The ....hormone releases the needed energy from the food stuffs

a-Growth b- estrogen c- thyroxin

B) draw the graph that show the relation between connection of cells in parallel and the electromotive force

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....

C) Give reasons for the following:

1- The colour of blue copper hydroxide changes by heat into black.

....

....

....

2- Mendel›s selecting the pea plant to conduct his experiments.

....

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....

Question 2

A) Complete the following sentences:

1- Oxidization is a chemical process where atom ....an electron or more.

2-The..is used to measure the electromotive force in units

known as ....

3- ....and ....discovered the means of how gene controls appearance trait

4- ....and ....hormones are produced from thyroid gland

B) Illustrate by balanced chemical equations the following reaction:

Adding silver nitrate solution to sodium chloride solution.

....

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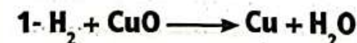
....

C) You have four similar cells; the electromotive force of each is 1.5 volt explain by using a diagram how you can connect them to obtain an emf

a-1.5 volts b- 3 volts c- 4.5 volts d-6 Volt

Question 3

A) Write the kind of each reaction

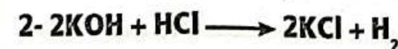


1- $H_2 + CuO \longrightarrow Cu + H_2O$

....

....

....



2- $2KOH + HCl \longrightarrow 2KCl + H_2$

....

....

....



3- $2Na + 2HCl \longrightarrow 2NaCl + H_2$

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....

....





B) Compare between the following:

direct current and alternating current from the point of: (Definition of each one - The field of using)

	direct current	alternating current
Definition		
The field of using		

C - Experiment to explain law of independent assortment of hereditary factors.

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Question 4

A) Write the scientific term for each of the following statements:

1- Substance which loses an electron or more during a chemical reaction.

(...)

2- Flowing of electric charges in a conducting element

(...)

3- A science that researches transmission of hereditary traits from one generation to

another by studying similarity and difference between parents and offspring.

(. ...)

4- The result when endocrine glands does not work properly.

(....)

B) Identify the process of oxidization, reduction, oxidizing factor and reducing factor in each of the following reactions:



$2Li + Pb^{+2} \longrightarrow 2Li^{+1} + Pb$

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C) Mention The model of Watson and Creek of the DNA structure to explain how the genes perform their functions

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امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

4

وزارة التربية والتعليم

مديرية التربية والتعليم بالمحافظة

زمن الاجابة :ساعتان

عدد أوراق الامتحان (١٤) بخلاف الغلاف وعلي الطلاب مسئولية المراجعة والتأكد من ذلك قبل تسليم الكراسة

الاسئلة: من .. إلي	الدرجة	التوقيع	
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مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف::..

امضاءات المراجعين:..

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وزارة التربية والتعليم

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امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

التاريخ: / / ٢٠٢٥

4

نموذج ثالثة اعدادي

زمن الاجابة :ساعتان

اسم الطالب رباعياً:..

المدرسة:.................................... الادارة:....................................

رقم الجلوس .... المحافظة :....................................

توقيع الملاحظين
بصحة البيانات ومطابقة
عدد اوراق كراسة الاجابة
عند تسلمها من الطالب

Question 1

A) Choose the correct answer for each of the following statements;

1-The . ...compound is used in the dry electrode.

a-Sodium chloride b- ammonium chloride c- magnesium chloride

2- The mathematical relation of Ohm's law.. ....

a- R = V/I b- I = RV c- R = VxI

3-The hormone responsible for producing secondary sexual male characteristics is the

..hormone,

a-Progesterone b- testosterone c- adrenalin

B) Explain the Occurrence of effervescence with fire on putting sodium in water .

....

....

C) The potential difference between the two ends of a conductor is 6 volts and the electric current intensity passing in the conductor is 0.5 ampere what is the electric current intensity passing in the conductor if it is connected by electric source its electric potential is 12 volts

....

....

....

Question 2

A) Complete the following sentences:

1- ....agent is the substance which gains one electron or more

2-While connecting charged conductors, the electric current passes from the conductor have ....potential to the conductor have ....potential.

3- ....and ....were able to make a model for the DNA molecule.

4-Types of mutation according to the inheritance to ....and ....

B) Illustrate by balanced chemical equations the following reactions:

1- The effect of heat on red mercuric oxide.

....

....

2- The reaction of zinc with diluted hydrochloric acid.

....

....

C) What happens if we put a piece of potassium in water .

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Question 3

A) Choose the correct answer for each of the following statements;

1-When calcium carbonate is heated..is obtained

a - Calcium bicarbonate and carbon dioxide **b - Calcium hydroxide and carbon dioxide**

c - Calcium oxide and carbon monoxide **d - Calcium oxide and carbon dioxide**

2-The...... ....is the measuring unit of the current intensity.

a-Coulomb **b- ampere** **c- ohm**

3- When copper hydroxide is heated we obtain:

a- Copper carbonate and water **b- Copper oxide and water**

c- Copper and hydrogen **d- Copper oxide and hydrogen**

B) Find the potential difference between two points if the work done to transfer 50 coulomb is 200 joule .

....

....

....

....

C) By using symbolic formulae complete and balance the following equations



1- 2Nac1 + H_2CO_3 $\longrightarrow$ .... + ...



2- $NaNO_3$ + ... $\longrightarrow$ Nac1 + ...

Question 4

A) By balanced chemical equations, express each of the following reactions

1-The metal replaces Hydrogen of the acid

....

....

2-The metal replaces another one-of its salt solutions

....

....

3- Double decomposition (replacement)

....

....

B) One of your collages asks you for a help in connecting a new radio in its house if you know that the electric potential at the house is 220 volt and that of the radio is 110 volt.

What is your suggestion to avoid harms during the operation of the radio?

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C) by Using symbols to express the results of mating between each of the following.

Two pea plants where one carries white flowers and another carries purple flowers.

....

....

....

النموذج الخامس

وزارة التربية والتعليم
مديرية التربية والتعليم بالمحافظة

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

5

زمن الاجابة :ساعتان

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رقم المراقبة

مجموع الدرجات بالحروف:...

امضاءات المراجعين:...

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التاريخ: / / ٢٠٢٥

نموذج ثالثة اعدادي

5

زمن الاجابة :ساعتان

اسم الطالب رباعياً:...

المدرسة:.......................... الادارة:..................................

رقم الجلوس .... المحافظة :..............................

توقيع الملاحظين بصحة البيانات ومطابقة عدد اوراق كراسة الاجابة عند تسلمها من الطالب

Question 1

A) Write the scientific term for each of the following statements:

1- Chemical process causes increasing of oxygen and decreasing of hydrogen

(....)

2- Obstruction of electric current in a conductor.

(....)

3- Appearance of a hereditary trait in individuals of first generation after the mating تزاوج where one carries a pure hereditary trait that contrasts the trait that the other individual carries

(....)

B) What is the quantity of electricity passes in a conductor its resistance 1000 Ohm for 30 minute when the potential difference between its ends 220 volts

....

....

....

....

C) Give reasons for the following:

1-The electromotive force of a battery whose cells are connected in series is greater than that one whose cells are connected in parallel.

....

....

....

....

2-When a pure yellow pod pea plant is pollinated with a pure green pod pea plant it produces plants that are all with green pods.

....

....

....

....

Question 2

A) Write the scientific term for each of the following statements:

1- A reaction where an element substitutes another one.

(...)

2- Resistance of a conductor allows of an electric current of 1 Ampere when the potential difference between its two ends is 1 Volt.

(...)

3-Trait that appears in all individuals of first generation

(...)

B) Compare between the Connection in series and in parallel.

	the Connection cells in series	the Connection cells in parallel.
connection		
Emf		
A solved example		

C) Illustrate by balanced chemical equations the following reactions:

1- The effect of heat on sodium nitrates.

....

....

2- Chemical reactions in which the compound breaks up into simple elements.

....

....

....

Question 3

A) Write the scientific term for each of the following statements:

1- Chemical reactions in which change between two radicals (ions) of two compounds to form other compounds.

(....)

2- Intensity of electric current when electric charge of 1 Coulomb passes in conductor in (1) second.

(....)

3- Mechanism with which hormones work to achieve the homeostasis balance in the human body.

(....)

B) Illustrate by balanced chemical equations the following reactions:

1- A chemical process in which atom of element acquires one or more electron.

....

....

....

2- The reaction of water with sodium.

....

....

....

3- The decomposition of sodium nitrates by heat.

....

....

....

C) Give reasons for the following:

1- Mendel made self pollination between yellow and green seeds several times .

....

....

2- Some cells are connected in the electric circuit in series.

....

....

3- Voltammeter is connected to both poles of battery in electric circuit.

....

....

Question 4

A) Write the scientific term for each of the following statements:

1- Substance removes oxygen or gives hydrogen during chemical reaction

(..)

2- The measurement unit of the electromotive force of the electric cell.

(..)

3-Organs secreting hormones in human body.

(..)

4- Substance which loses an electron or more during a chemical reaction.

(..)

5- Chemical process causes increasing of oxygen and decreasing of hydrogen .

(..)

B) You have four similar cells; the electromotive force of each is 1.5 volt

explain by using a diagram how you can connect them to obtain an emf

a-1.5 volts **b- 3 volts** **c- 4.5 volts**

....

....

....

C) Identify the process of oxidization, reduction, oxidizing factor and reducing factor in each of the following reactions:



$2Na + Cl_2 \longrightarrow 2Na^+ + 2Cl^-$

....

....

....

....

....

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

6

زمن الاجابة :ساعتان

وزارة التربية والتعليم
مديرية التربية والتعليم بالمحافظة

عدد أوراق الامتحان (١٤) بخلاف الغلاف وعلي الطلاب مسئولية المراجعة والتأكد من ذلك قبل تسليم الكراسة

الاسئلة: من .. إلي	الدرجة	التوقيع	
		المقدر	المرجع

مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف:...

امضاءات المراجعين:...

رقم المراقبة

وزارة التربية والتعليم

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

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التاريخ: / / ٢٠٢٥

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نموذج ثالثة اعدادي

زمن الاجابة :ساعتان

اسم الطالب رباعياً:...

المدرسة:.................................. الادارة:..................................

رقم الجلوس .... المحافظة :..................................

توقيع الملاحظين
بصحة البيانات ومطابقة
عدد اوراق كراسة الاجابة
عند تسلمها من الطالب

Question 1

A) Complete the following sentences:

1- ....is the reaction between acid and alkali to form salt and water.

2- Electric current generated from a dynamo due to changing .... energy to ....

3- ....and...... ....hormones are produced from Pancreas gland

4 - When hydrogen gas passed over hot copper oxide, it converts to a ....

B) Illustrate by balanced chemical equations the following reactions:

1- Insertion of a magnesium ribbon in a solution of copper sulphate.

....

....

2- The reaction of hydrochloric acid with sodium hydroxide.

....

....

C) Correct the following sentences

1-The direct current can be transferred to a long distances.

....

....

2-The battery produces alternating electric current.

....

....

Question 2

A) Write the scientific term for each of the following statements:

1- The electric current of fixed intensity and direction. (............. ....)

2- A reaction where an element substitutes another one. (. ...)

3- Are parts of DNA on the chromosomes and control the hereditary traits of the individual. (. ....)

4-Mechanism in which hormone works in human body. (. ...)

B) Compare between the following:

1- Oxidation and reduction.

Oxidation	Reduction

2- Oxidation and oxidizing agent from the point of meaning of each one.

Oxidation	oxidizing agent



C) $HCl + NaOH \longrightarrow H_2O + A$



$A + AgNO_3 \longrightarrow ppt + B$



$B \longrightarrow salt + D$

....

....

....

....

....

Question 3

A) Complete the following sentences:

1- ....agent is the substance which gives oxygen and takes hydrogen.

2- Breakup of bonds in reactants and forming of new bonds is called. ....

3-Oxidation and reduction are two ....processes.

4- Cell produces....................................current while the dynamo produces

...current.

B) Give reasons for the following:

1- Rheostat is used in some electric circuits.

....

2- Mendel covers stamens of pea flowers during study character of seeds colour.

....

C) Illustration by drawing

Two pea plants where one carries a trait (long stem) and the other carries a trait (short stem)

....

....

....

....

Question 4

A) Write the scientific term for each of the following statements:

1- Flowing of electric charges in a conducting element (....)

2-Traits that aren't transmitted from generation to another.(....)

3- Substance removes oxygen or gives hydrogen during chemical reaction.

(....)

4- Affected by hormones and located faraway from glands. (....)

B) Identify the process of oxidization, reduction, oxidizing factor and reducing factor in each of the following reactions:



$CH4 + 2\,O_2 \longrightarrow CO2 + 2\,H_2O$



$H_2 + CuO \longrightarrow H_2O + Cu$

....

....

....

....

C) Draw a diagram represents each of the following:

Electric circuit used to verify Ohm›s law

....

....

....

....

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

7

زمن الاجابة :ساعتان

وزارة التربية والتعليم
مديرية التربية والتعليم بالمحافظة

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الاسئلة: من .. إلي	الدرجة	التوقيع: المقدر	التوقيع: المرجع

مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف:...

امضاءات المراجعين:...

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وزارة التربية والتعليم

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امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

التاريخ: / / ٢٠٢٥

7

نموذج ثالثة اعدادي

زمن الاجابة :ساعتان

اسم الطالب رباعياً...

المدرسة.......................................الادارة.......................................

رقم الجلوس ....المحافظة ....

توقيع الملاحظين بصحة البيانات ومطابقة عدد اوراق كراسة الاجابة عند تسلمها من الطالب

Question 1

A) Write the scientific term for each of the following statements:

1- Electric state of a conductor that shows transferring of electricity.(...................................)

2-Traits that aren't transmitted from generation to another. (....)

3- Amount of electric charges that flow in a conductor in a certain time.

(....)

4- The electric current of fixed intensity and direction.

(....)

5- Intensity of electric current when electric charge of 1 Coulomb passes in conductor in 1 second. (....)

B) Give reasons for the following:

1-Some cells are connected in the electric circuit in parallel.

....

....

2- Magnesium can replace copper in solutions while opposite cannot happen

....

....

C) By balanced chemical equations, express each of the following

reaction Neutralization

....

....

Question 2

A) Compare between the following:

The dominant trait and the recessive one with giving examples.

The dominant trait	the recessive trait

B) Complete the following sentences:

1-There are two types of electric current ....and . ...

2- Electric intensity is measured by............................ and its measuring unit is.

....

3- Oxidization is a chemical process where atom ....an electron or more.

4- .... agent is the substance which gains one electron or more

5- .... hormone secreted if the rate of glucose sugar increases in blood

C) By balanced chemical equations, express each of the following reaction

Adding magnesium to copper sulphate solution

....

....

....

Question 3

A) Write the scientific term for each of the following statements:

1- The measurement unit of the electromotive force of the electric cell.

(....)

2-It is chemically consisted of a nucleic acid (DNA) with protein.

(....)

3- Chemical reactions in which change between two radicals (ions) of two compounds to form other compounds (....)

4- A science that researches transmission of hereditary traits from one generation to another by studying similarity and difference between parents and offspring.

(....)

B) Correct the following sentence

e.m.f. for several cells in series = e.m.f for one cell.

....

....

....

C) Draw a diagram represents the following:

Alternating current cycles (the graph between intensity and time)

....

....

Question 4

A) Choose the correct answer for each of the following statements;

1-The unit of measuring the electric resistance is...

a-Ampere **b –Volt** **c – Ohm**

2- Electric resistance value of a conductor changes when the value of ....changes

a- The conductor dimension **b- The passing electric current intent intensity**

c- The potential difference between its ends **d- The other components in the electric circuit**

3- To measure electric current intensity passing in electric circuit used

a- Pyrometer **b - barometer** **c -voltmeter** **d -ammeter**

4-To measure potential difference between the two ends of a conductor in electric circuit..is used.

a- Pyrometer **b - barometer** **c -voltmeter** **d -ammeter**

B) By balanced chemical equations, express each of the following reactions

1- Adding aluminum turnings to dilute hydrochloric acid

....

....

2-The reaction of hydrochloric acid with sodium hydroxide and what is the name of this reaction.

....

....

C) What happens if a hydrogen gas passes over copper oxide with heating

....

....

وزارة التربية والتعليم
مديرية التربية والتعليم بالمحافظة

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

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زمن الاجابة :ساعتان

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الاسئلة: من .. إلي	الدرجة	التوقيع	
		المقدر	المرجع

مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف::..

امضاءات المراجعين::..

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وزارة التربية والتعليم

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

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التاريخ: / / ٢٠٢٥

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نموذج ثالثة اعدادي

زمن الاجابة :ساعتان

اسم الطالب رباعياً:..

المدرسة:.......................... الادارة:..........................

رقم الجلوس .... المحافظة :..........................

توقيع الملاحظين
بصحة البيانات ومطابقة
عدد اوراق كراسة الاجابة
عند تسلمها من الطالب

Question 1

A) Write the scientific term for each of the following statements:

1-A device used to measure intensity of electric current.

(....)

2- Electric state of a conductor that shows transferring of electricity

(. ...)

3- Appearance of a hereditary trait in individuals of first generation after the mating تزاوج where one carries a pure hereditary trait that contrasts the trait that the other individual carries. (....)

B) correct the underlined wards

1 – The increase in the concentration of the reactants decreases speed

. ...

. ...

2 – The reactions of ionic compounds are slower than of covalent compound

. ...

. ...

C) Give reasons for the following:

1- Some cells are connected in the electric circuit in series.

....

....

2- Growth takes place in bones of limbs which make people giants

....

....

Question 1

A) Define each of the following:

1- Electric current intensity.

. ...

. ...

2- Ohm's law

. ...

. ...

B) What is the scientific idea for each of the following?

The dominance of curried hair character on straight hair character

....

....

....

....

C) Illustrate by balanced chemical equations the following reactions:

1- The reaction between hydrochloric acid and sodium hydroxide.

....

....

2- Adding silver nitrate solution to sodium chloride solution.

....

....

Question 3

A) Give reasons for the following:

1-Some cells are connected in the electric circuit in parallel.

....

....

2-The electromotive force of a battery whose cells are connected in series is greater than that one whose cells are connected in parallel.

....

....

....

B) Draw a diagram represents each of the following:

Graphic representation of the direct current

....

....

....

....

....

....

C) calculate quantity of electricity passed in a conductor its resistance 2200 ohm for

two minutes when connected with electric source its electric potential 220 volt

Question 4

A) What is the scientific idea on which:

The dominance of the presence of facial dimples character of the absence of facial dimples character.

B) By balanced chemical equations, express each of the following reaction

The reaction of water with sodium.

C) an electric resistance (6) ohm in electric circuit is connected with electric source its potential difference 3volts

Calculate the electric current intensity in each resistance

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

MINISTRY OF EDUCATION AND TECHNICAL EDUCATION
وزارة التربية والتعليم والتعليم الفني

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / / ٢٠٢٥

9

زمن الاجابة :ساعتان

وزارة التربية والتعليم
مديرية التربية والتعليم بالمحافظة

الاسئلة: من .. إلي	الدرجة	التوقيع	
		المقدر	المرجع

عدد أوراق الامتحان (١٤) بخلاف الغلاف وعلي الطلاب مسئولية المراجعة والتأكد من ذلك قبل تسليم الكراسة

مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف::..

امضاءات المراجعين::..

رقم المراقبة

وزارة التربية والتعليم

امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

التاريخ: / / ٢٠٢٥

زمن الاجابة :ساعتان

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9

نموذج ثالثة اعدادي

اسم الطالب رباعياً:..

المدرسة:.............................الادارة:..................................

رقم الجلوس ....المحافظة :..................................

توقيع الملاحظين بصحة البيانات ومطابقة عدد اوراق كراسة الاجابة عند تسلمها من الطالب

Question 1

A) By balanced chemical equations, express each of the following reactions

1-reduction of hot copper oxide by passing hydrogen gas

....

....

2- Adding calcium hydroxide solution to hydrochloric acid

....

....

B) A conductor of electric resistance 22 ohm and the quantity of electricity passed **through it in one second equals 10 coulombs**

Calculate the potential difference between the its two ends

....

....

....

C) Define each of the following:

1 – Ammeter

....

....

2-Electric potential

....

....

Question 2

A) Compare between the following:

The inherited traits and the acquired traits

The inherited traits	The acquired traits

) Give reasons for the following:

- The ability of bending the tongue is a dominant trait in the human being.

....

....

2- Mendel covers stamens of pea flowers during study traits of seeds colour.

....

....

C) Calculate the electric current intensity passes through a cross section due to flow of (900) coulomb for 1.5 minute

....

....

Question 3

A) Define each of the following:

1-Acquired characters.

....

....

....

2- Dominant character.

....

....

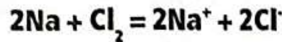
....

B) Compare between the following:

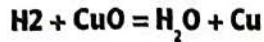
Dominant and recessive character from the point of hereditary genes

Dominant character	Recessive character

C) Identify the process of oxidization, reduction, oxidizing factor and reducing factor in each of the following reactions:



$2Na + Cl_2 = 2Na^+ + 2Cl^-$



$H2 + CuO = H_2O + Cu$

....

....

....

....

Question 4

A) Define each of the following:

1-Volt

....

....

2- Electric resistance

....

....

3- Ohm

....

....

B) What is the quantity of electricity passes in a conductor its resistance 1000 Ohm for 30 minute when the potential difference between its ends 220 volts

....

....

C) Mendel supposes a group of hypotheses to explain the presence of recessive character in the first generation in the studied experiments on pea plant. Explain these hypotheses?

....

....

....

....

وزارة التربية والتعليم
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امتحان تجريبي شهادة اتمام الشهادة الاعدادية

المادة: Science

نموذج ثالثة اعدادي

التاريخ: / /٢٠٢٥

10

زمن الاجابة :ساعتان

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الاسئلة: من .. إلي	الدرجة	التوقيع	
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مجموع الدرجات

رقم المراقبة

مجموع الدرجات بالحروف:..

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التاريخ: / /٢٠٢٥

10

نموذج ثالثة اعدادي

زمن الاجابة :ساعتان

اسم الطالب رباعياً:..

المدرسة:..................................الادارة:..................................

رقم الجلوس ....المحافظة :..................................

توقيع الملاحظين
بصحة البيانات ومطابقة
عدد اوراق كراسة الاجابة
عند تسلمها من الطالب

Question 1

A) Define each of the following:

Second Mendel law:

If two individuals are different in more contrasting traits copulate, the trait of each pair is inherited independently and appears in the second generation at a ratio of 3 : 1

....

....

....

....

....

B) Calculate **the potential difference of the two ends of a vacuum cleaner whose resistance is 22 Ohm and the current intensity passing through it is 10 Ampere**

....

....

....

Question 2

A) Write the scientific term for each of the following statements:

1- Change in nature of hereditary factors that control the traits of living organism, which results in a change in the traits of living organism

(....)

2- The characters ready to be transmitted from one generation to another.

(....)

3-Trait that appears in all individuals of first generation

(....)

B) Correct the following sentences

1-The direct current can be transferred to a long distances.

....

....

2-The battery produces alternating electric current.

....

....

. C) Experiment to explain law of independent assortment of hereditary factors.

....

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D) Mention the model of Watson and Creek of the DNA structure to explain how the genes perform their functions

....

....

....

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....

....

....

....

Question 3

A) state the law of segregation of factors .

....

....

....

....

....

B) What would happen?

1-The reading of both ammeter and voltmeter in electric circuit to achieve ohm's law if the electric resistance is spoiled.






2- To the percentage of blood sugar if the pancreas stops secreting glucagon hormone

....

....

3- to the electric current intensity if the length of the rheostat wire increases

....

....

Question 4

A) Complete the following sentences:

1- During .... reactions, compound breaks by heat to its simple components.

2- . ... is the reaction between acid and alkali to form salt and water.

3- ....agent is the substance which gives oxygen and takes hydrogen

4-The current flow through a conductor is ....proportional to resistance

B) calculate the quantity of electric current if the current intensity is 3 ampere pass in 13 second

....

....

....

....

C) Correct the under lined ward :

1 - Ampere is used to measure the electro motive force

....

....

2 - Ammeter is the device that measures the potential difference

....

....

3 - Volt is the unit fer measuring electric current resistance

....

....

Model 1

Question 1

(A)

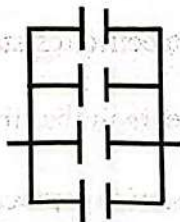
1- chemical reaction.
2- reduction process.
3- electricity .
4- electric current
5 – pititary gland
6- Ohm.

(B)

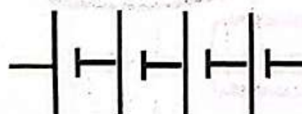
1- $HCl + NaOH \rightarrow NaCl + H_2O$
2- $NaCl + AgNO_3 \rightarrow AgCl + NaNO_3$

(C)

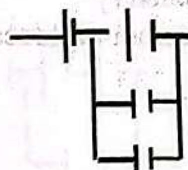
a -1.2 volt



b- 4.8 volt



c- 2.4 volt



Question 2

(A)

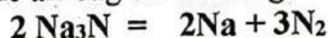
1- Electric current intensity is the quantity of electricity that pass in a wire in one second.
2- Diabetes is disease caused by decreasing in insulin

(B)

1-2HgO
2- 2Na NO_2
3-H Cl

(C) the air bag in cars is dew signed on the occurrence of the car crash they get vacuumed and sodium nitride decomposes forming nitrogen that fills the air bag on crashing.

$2\ Na_3N = 2Na + 3N_2$



Question 3

(A)

1- liberation of energy increases
2- The current intensity and potential difference can't be controlled.

(B)

1- inversely
2- ampere
3- thermal decomposition
4- endocrine glands
5- hormones - cells

(C) metal oxide gives oxygen but metal hydroxide gives water vapour

Question 4

(A)

$Zn \rightarrow Zn^{+2}$ oxidation process
$Cr^{+3} \rightarrow Cr$ reduction process
Cr^{+3} oxidizing factor
Zn reducing factor

(B)

1- a-Voltmeter
2- b- Copper oxide and water
3- c- More active element replaces less active element

(C)

1-because it can change into direct.
2- to measure the electromotive force.

Model 2

Question 1

(A)
1- c- current intensity and resistance.
2- a- calcitonin
3- c-voltmeter
4 – d – Calcium oxide and carbon dioxide

(B)
1- due to decreasing in growth hormone
2- because id used in making building materials
3- because its life cycle is short and gives large number of plants in one generation.

Question 2

(A)
1- electric current intensity is direct proportional to the electric potential difference at constant temperature.
2-The gene it is a part of DNA that presents on the chromosomes

(B) 1- 2HgO
2- $2N_aNO_2$

(C)
I = V / R = 220 / 2200 = 0.1 ampere
q = I x t = 0.1 x (2 x 60) = 12 coulomb

Question 3

(A) in case of the connection of electric cells in series the electromotive increases and in case of parallel the value of produced electromotive force still as it is

(B)
1- The individuals who receive one dominant gene from either parent will have the dominant trait,
2- Resulting from the occurrence of the induced mutations.

(C) Due to evolving of hydrogen gas

Question 4

(A)
1- Hormones
2- reduction
3- Electric resistance
4- Ammeter

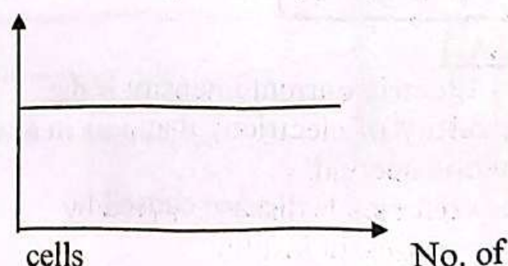
(B)
1- to change the electric resistance and intensity
2- because it appears in the first generation
3- because magnesium replaces copper

Model 3

Question 1

(A)
1- b- the current intensity
2- c- More active element replaces less active element
3- c- thyroxin

(B)
Connection in parallel



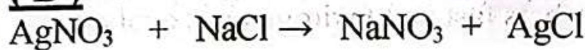
1- because copper hydroxide decomposes to copper oxide that has a black color and carbon dioxide
2- because it can grow fast and its life cycle is short.

Question 2

(A)

1- lose.
2- voltmeter - volts
3- Beadle and Tatum
4- thyroxin and calcitonin

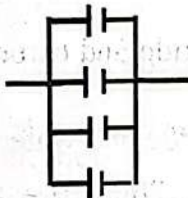
(B)



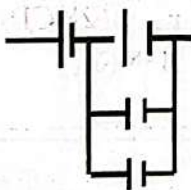
$AgNO_3 + NaCl \rightarrow NaNO_3 + AgCl$

(C)

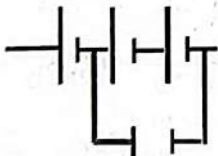
a-



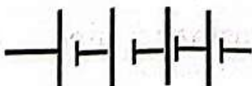
b-



c-



c-



Question 3

(A)

1- simple substitution reaction
2- double substitution reaction
3- simple substitution reaction

(B)

Points of comparison	Direct current DC	Alternating current AC
Definition	It has constant intensity	It has variable intensities
Uses	Operating some electric machines such as torches & electroplating.	Lighting houses & streets & operating electric appliances at houses.

(C)

Steps:

1-Mendel planted a pea plant that produces yellow seeds and a pea plant that produces green seeds for several generations.
2- Mendel makes self pollination for plants.
3- Mendel removed the stamens

Obs.

1- Yellow seeds produced yellow seeds
2- Green seeds produced green seeds plants.

Question 4

(A)
1- Reducing agent
2- electricity
3- genetics
4- hormone disorder

(B)
oxidization $2Li \rightarrow 2Li^{+1}$
reduction $Pb^{+2} \rightarrow Pb$
oxidizing factor Pb^{+2}
reducing factor 2Li

(C)
1-The model is composed of two strands coiled make double helix
2- Strands consisted of sugar and phosphate groups
3- Strands join with groups of four types of nitrogenous bases.
(Adenine with thymine and guanine with cytosine)
4-The nitrogenous bases are organized of threes
5-Every three represent a specific code responsible for a distinct trait.

Model 4

Question 1

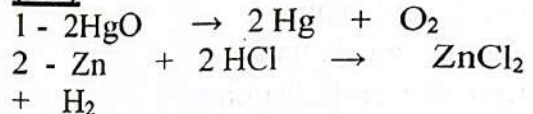
(A)
1- b- ammonium chloride
2- a- R = V/I
3- b- testosterone

(B) due to hydrogen gas that evolved with heat .

(C) I = 12 x 0.5 / 6 = 1 ampere

Question 2

(A)
1- oxidizing
2- higher - lower.
3- Watson and crick.
4-somatic mutation and gamete mutation

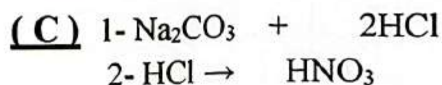
(B)

1 - $2HgO \rightarrow 2Hg + O_2$
2 - $Zn + 2HCl \rightarrow ZnCl_2 + H_2$

(C)
reacts fast and hydrogen gas evolved

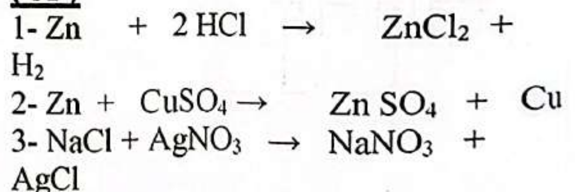
Question 3

(A)
1- d - Calcium oxide and carbon dioxide
2- b- ampere
3- b- Copper oxide and water

(B) v = w / q = 200 / 50 = 4 volt

(C)

1- Na_2CO_3 + 2HCl
2- HCl → HNO_3

Question 4

(A)

1- $Zn + 2HCl \rightarrow ZnCl_2 + H_2$
2- $Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$
3- $NaCl + AgNO_3 \rightarrow NaNO_3 + AgCl$

(B) step down transformer used .

(C)
WW x PP
W W x P P
WP WP WP WP
All flowers have hybrid white

Model 5

Question 1

(A)

1- oxidation
2- Resistance
3- the principle of complete dominance

(B)

I = V / R = 220 / 1000 = 0.22 ampere
q = I x t = 0.22 x (30 x 60) = 396 coulomb

(C)

1- because the relation between the electromotive force and number of cells connected in series is directelly
2- Because a green colour is domainant

Question 2

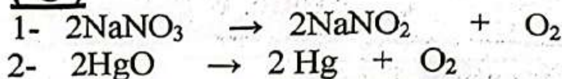
(A)

1- Simple substitution reaction
2- One ohm
3- dominant traits

(B)

Points of comparison	Connecting cells in series	Connecting cells in parallel
Connection	The negative pole is connected to the positive pole of the 2nd cell & so on.	The positive poles are connected together, while the negative poles are connected together.
Emf	= the sum of emf of all the cells. $E = E_1 + E_2 + E_3 + E_4$	If the cells have the same emf = emf of one cell. $E = E_1$ or E_2 or E_3 since $E_1 = E_2 = E_3$.
A solved example	A circuit contains 4 cells connected in series. The emf of the battery = 4x1.5 = 6 volt.	A circuit contains 3 cells connected in parallel. emf = 2 volt

(C)



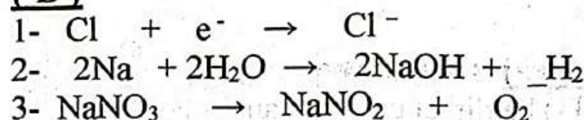
1- $2NaNO_3 \rightarrow 2NaNO_2 + O_2$
2- $2HgO \rightarrow 2\,Hg + O_2$

Question 3

(A)

1- Double substitution reaction
2- One ampere
3- Feedback mechanism

(B)



1- $Cl + e^- \rightarrow Cl^-$
2- $2Na + 2H_2O \rightarrow 2NaOH + H_2$
3- $NaNO_3 \rightarrow NaNO_2 + O_2$

(C)

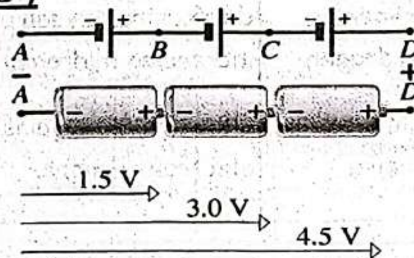
1- To be sure of purity .
2- to increase the electromotive force.
3- to measure the electromotive force of battery.

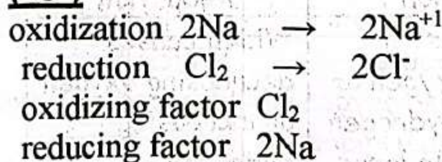
Question 4

(A)

1- reducing agent
2- volt
3- Endocrine glands
4- reducing agent
5- oxidation process

(B)





(C)

oxidization $2Na \rightarrow 2Na^{+1}$
reduction $Cl_2 \rightarrow 2Cl^-$
oxidizing factor Cl_2
reducing factor $2Na$

Model 6

Question 1

(A)

1- neutralization.
2- kinetic energy to electric energy
3- Insulin and Glucagon hormones
4 - water vapour

(B)

1- $Mg + CuSO_4 \rightarrow MgSO_4 + Cu$
2- $HCl + NaOH \rightarrow NaCl + H_2O$

(C)

1-The direct current cannot be transferred to a long distance.
2-The battery produces direct electric current.

Question 2

(A)

1- Direct current
2- Simple substitution reaction
3- gene
4- Feedback mechanism

(B)

1-

Oxidation	Reduction
Which causes increasing oxygen or decreasing hydrogen OR when atom loses electron or more.	Which causes decreasing oxygen or increasing hydrogen OR when atom gains electron or more.

2-

Oxidation	Reduction
Which causes increasing oxygen or decreasing hydrogen OR when atom loses electron or more.	Which causes decreasing oxygen or increasing hydrogen OR when atom gains electron or more.

(C) A is NaCl
B is $NaNO_3$
D is O_2

Question 3

(A)

1- oxidizing agent
2- chemical reaction
3- concurrent.
4- direct current – alternating current.

(B)

1- to change the electric current intensity.
2- To be insure it does not self-pollinat

(c)

Long short
T T × t t
T T × t t
T t

Hybrid tall will produced

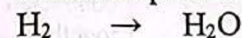
Question 4

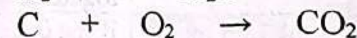
(A)

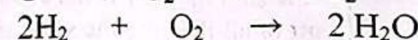
1- electricity
2- acquired trait
3- Reducing agent
4- Target cells

(B)

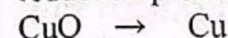
oxidation process


$H_2 \rightarrow H_2O$


$C + O_2 \rightarrow CO_2$

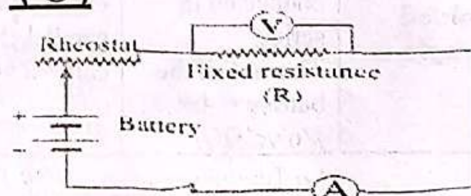

$2H_2 + O_2 \rightarrow 2H_2O$

reduction process


$CuO \rightarrow Cu$

O_2 and CuO are oxidizing factors
H_2 and CH_4 reducing factor

(C)



Model 7

Question 1

(A) Write the scientific term for each of the following statements:

1- Electric potential
2- acquired trait
3- electric current
4- direct current
5- 1 ampere

(B)

1- fix the electric current intensity.
2- because Magnesium more active than copper.

(C) $HCl + NaOH \rightarrow NaCl + H_2O$

Question 2

(A)

1-direct current and alternating current
2- ammeter - ampere
3- lose
4- oxidizing
5- insulin

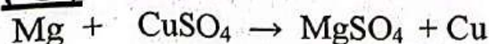
(B)

Dominant trait:
It is the trait which appears either exists with another dominant or recessive trait.
Recessive trait
It is the trait which appears only with another similar recessive trait.

Ex.

Dominant trait	Recessive trait
1- The ability to roll the tongue	Can't roll tongue

(C)



$Mg + CuSO_4 \rightarrow MgSO_4 + Cu$

Question 3

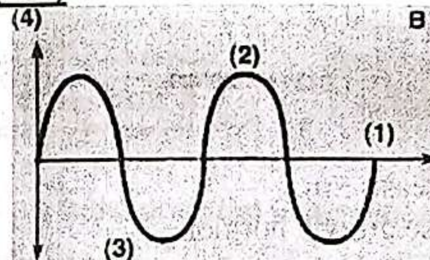
(A)

1- volt
2- chromosome
3- substitution reaction
4- genetics

(B)

e.m.f. for several cells in series more than e.m.f for one cell.

(C)



Question 4

(A)

1- c – Ohm
2- a- The conductor dimension
3- d-ammeter
4- c- voltmeter

(B)



1- $2Al + 6HCl \rightarrow 2AlCl_3 + 3H_2$

2- $HCl + NaOH \rightarrow NaCl + H_2O$ this reaction is called neutralization

(C) Converts to copper

Model 8

Question 1

(A)

1- ammeter
2- Electric potential
3- The principle of complete dominance

(B)

1 - increase
2 - higher

(C)

1- To increase e.m.f.
2- increase growth hormone

Question 2

(A)

1- it is the amount of electric charges that pass in a conductor in one second
2- the electric current intensity is directely proportional to the electricomotive force at constant temerature

(B)

The individuals who receive one dominant gene from either parent will have the dominant trait,

(C)

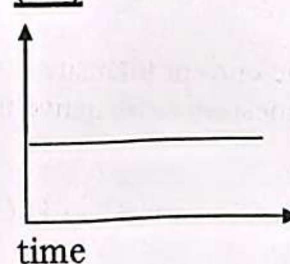
1- $HCl + NaOH \rightarrow NaCl + H_2O$
2- $NaCl + AgNO_3 \rightarrow NaNO_3 + AgCl$
\

Question 3

(A)

1- to fix electromotive force
2-The electromotive force of a battery whose cells are connected in series is greater than that one whose cells are connected in parallel.

(B)



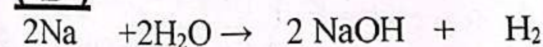
(C) 12 volt

Question 4

(A)

The individuals who receive one dominant gene from either parent will have the dominant trait.

(B)


$2Na + 2H_2O \rightarrow 2NaOH + H_2$

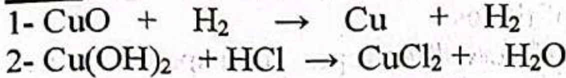
(C)

$I = V / R = 3 / 6 = 0.5$ Ampere

Model 9

Question 1

(A)



1- $CuO + H_2 \rightarrow Cu + H_2$
2- $Cu(OH)_2 + HCl \rightarrow CuCl_2 + H_2O$

(B)

v = R x I = 22 x (10 / 1) = 220 volt

(C)

1 - it is a device used to measures the electric current intensity
2- it is the state of a conductor that show the direction of electric current

---

Question 2

(A)

The inherited traits : They can transfer from generation to another
the acquired traits : They can't transfer from generation to another

(B)

1- Because it appears in first generation
2- to prevent self pollination.

(C)

I = q / t = 900 / 90 = 10 ampere

Question 3

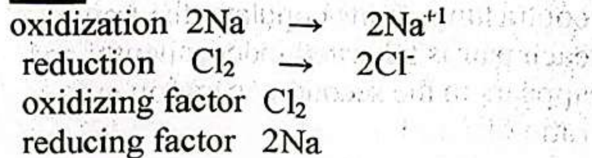
(A)

1- Characters can not transfer from parents to offspring
2- it is that appear in first generation alone.

(B)

1- In dominant gene appears in first generation
2- In recessive character genes appear in second generation

(C)



oxidization $2Na \rightarrow 2Na^{+1}$
reduction $Cl_2 \rightarrow 2Cl^-$
oxidizing factor Cl_2
reducing factor 2Na

Question 4

(A)

1- It is the potential difference when the electric current intensity equals to one ampere and resistance one ohm
2- it is the opposition in the electric wire
3- it is the resistance when the intensity equals to one ampere and potential difference is one volt

(B) q = I x t = (V / R) x t = (220/1000) x 30 x 60 = 396 coulomb

(C)

1- The hereditary traits transmitted by genes.
2- Each trait controlled by two factors from father and mother
3- Factors are similar if trait is pure and different if the trait is impure
4- The two factors separate when gametes are formed

Model 10

Question 1

(A)
If two individuals are different in more contrasting traits copulate, the trait of each pair is inherited independently and appears in the second generation at a ratio of 3 : 1

(B) v = R x I = 22 x 10 = 220 volt

Question 2

(A) 1- mutation
2- dominant traits
3- dominant genes

(B)
1-The direct current can't be transferred to a long distance.
2-The battery produces direct electric current.

(C)
Steps:
1-Mendel planted a pea plant that produces yellow seeds and a pea plant that produces green seeds for several generations.
2- Mendel makes self pollination for plants.
3- Mendel removed the stamens
Obs.
1- Yellow seeds produced yellow seeds
2- Green seeds produced green seeds plants.

(D) The model of Watson and Creek of the DNA structure to explain how the genes perform their functions
1-The model is composed of two strands coiled make double helix
2- Strands consisted of sugar and phosphate groups
3- Strands join with groups of four types of nitrogenous bases.
(Adenine with thymine and guanine with cytosine)
4-The nitrogenous bases are organized of threes
5-Every three represent a specific code responsible for a distinct trait.

Question 3

(A)
When two individuals of any pure pair of allomorphic character differ from one another crossed, only one character appears in Fl, and then the two characters appear together in F2 by the ratio 3-1

(B)
1- resistance will be constant
2- insulin produce
3- the electric current intensity decreases

Question 4

(A) Complete the following sentences:
1- thermal decomposition reactions
2- neutralization
3- oxidizing
4- inversely

(B)

q = I x t = 3 x 13 = 39 coulomb

C) Correct the under line
1- volt
2- voltmeter
3- Ohm

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاى نطبع الصفحات من صفحة 4 الى صفحة 9

